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10-6-03

Phibro-Tech, Inc.
Santa Fe Springs, California

Revised Draft - Site Conceptual Model

October 6, 2003

Prepared for:

Phibro-Tech, Inc. (PTI)
8851 Dice Road
Santa Fe Springs, California 90670

Prepared by:

CDM
18581 Teller Ave., Suite 200
Irvine, California 92612

Project No. 2279-36878.CG.AsNeeded

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The information contained in the document *Site Conceptual Model* for the Phibro-Tech, Inc. facility in Santa Fe Springs, California, dated October 6, 2003, has received appropriate technical review and approval. The conclusions and recommendations presented represent professional judgments and are based upon findings from the investigations and sampling identified in the report and the interpretation of such data based on our experience and background. This acknowledgement is made in lieu of all warranties, either expressed or implied. This document was prepared under the supervision of a California Registered Geologist.

Reviewed and Approved by:

Sharon Wallin, R.G.
Project Manager

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Section 1 Introduction

This document summarizes pertinent information regarding historical and current operations and investigations performed at the Phibro-Tech, Inc. (PTI) facility located in Santa Fe Springs, California. Environmental assessment activities were performed at the facility in the late-1980s, and in the early-1990s a RCRA Facility Investigation (RFI) was performed in two separate phases. Groundwater monitoring was first performed at the Site in 1985. Quarterly groundwater monitoring is currently on-going and has been performed since 1986 on primarily a quarterly basis. The development of the Site Conceptual Model (SCM) presented in this document was requested by the California Department of Toxic Substances Control (DTSC). The intended use of the SCM is as a basis of reference for evaluating and selecting an appropriate remedial approach for the vadose zone and affected aquifers underlying the PTI facility. The following subsections discuss location, climate, etc., and activities and operations at the subject site and nearby facilities. Nearby water supply wells are also discussed in this section.

1.1 Location

The Phibro-Tech, Inc. (PTI) facility (Site) is located at 8851 Dice Road in Santa Fe Springs, Los Angeles County, California. It is situated on approximately 4.8 acres in an industrialized section of the city. Surrounding PTI directly to the north, west and east are other industrial complexes. Directly south of PTI are a set of railroad tracks, with additional industrial facilities south of the railroad tracks. The nearest residential neighborhood is approximately 1000 feet to the north. Site location is illustrated on Figure 1-1. Figures and tables are provided at the rear of each section where they are first discussed, with historical figures and tables provided in the appendices.

1.2 Regional Setting

The Site is located in the Santa Fe Springs Plain within the Coastal Plain of Los Angeles County, a slightly rolling plain that dips northeast towards the City of Whittier. The facility itself is located on fairly flat land that slopes from northeast to southwest. Elevations at the Site range from approximately 148 to 154 feet above mean sea level (MSL) (CDM, May 1992).

The Site is located along the northeastern margin of the Central Block of the Los Angeles Basin, and on the Santa Fe Springs Alluvial Plain. The Whittier Fault zone, a prominent regional structure, is located approximately three miles northeast. This fault zone comprises the northern boundary of the Central Block (USGS, 1965).

1.3 Climate

Climate in the vicinity of the facility is characterized as semi-arid. Mean temperature is 62 degrees Fahrenheit (°F), and recorded extremes in nearby areas range between 18°F and 116°F. Average rainfall is 13 to 14 inches per year, occurring primarily between December and April (Clayton, 2002). The greatest amounts of precipitation occur during winter months in the form of rain, with little or no precipitation occurring during the summer months (CDM, May 1992). As indicated on Figure 4 (Appendix G, higher than normal precipitation occurred during the mid-1990s. The wind direction is predominately from the southwest (Clayton, 2002).

1.4 Site History and Historical Operations

Records indicate that the earliest use of the land was as a railroad switching station owned by Pacific Electric Railway Company. From the late 1940s to the early 1950s, a foundry casting facility operated on the property. Pacific Western Chemical Company occupied the site from 1957 to 1960. On December 24, 1959, Pacific Western Chemical Company changed its name to Southern California Chemical (SCC). In 1984, CP Chemicals, Inc. purchased the SCC facility and property. In 1994, the company changed its name to Phibro-Tech, Inc. (PTI). PTI is a New York Corporation headquartered in Fort Lee, New Jersey.

PTI operates under hazardous waste facility RCRA permit 91-3-TS-002, and receives various hazardous aqueous wastes and recyclable materials, mostly from the electronics and aerospace industries. PTI treats these substances to create usable new products that are sold. Examples of these products include plating solutions, brighteners, and conditioners. These solutions typically contain copper, iron, ammonium fluoride, tin, lead, chromium, nickel, heavy metals, sulfates, chlorides and hydroxides.

In 1988, USEPA performed an aerial photographic analysis of the Site spanning a 44 year period (1945 through 1988). The analysis noted that in 1945 the area was occupied by a small power generating facility and bulk oil storage tanks. In 1953, the power facility was gone and a small unidentified industry was noted in the southeast corner of the Site. In 1959, the active chemical facility was first noted. Throughout the approximately 30 year period following 1959, the analysis noted a variety of process areas, horizontal and vertical tanks, drums storage, staining, a spoil pile, and unlined and lined containment ponds. The 1988 photograph indicated that several impoundments in the Copper Cement Pond Area had been filled in, two settling basins were storage tank containment structures, and the number of 55-gallon drums in uncontained storage was approximately 4,700. The analysis noted that the facility continued to present a neat and clean appearance, indicating good housekeeping practices were in use at the Site.

The Current Conditions Report (CCR; CDM, 1990) provides additional information on historical activities at the Site. Figures 6 and 7 from the CCR illustrate the locations of Hazardous and Solid Waste Treatment Storage and Disposal pre-November 19, 1980 and post-November 19, 1980, respectively. The figures also include a listing of products, tank numbers, and capacities for the various waste management units present pre- and post-November 19, 1980. Figure 8 illustrates the locations of approximate historical discharge locations. Copies of Figures 6, 7, and 8 from the CCR are included in Appendix E.

According to the CCR, information on facility manufacturing processes prior to 1971 is relatively scarce. Pacific Western Chemical applied for a waste disposal permit for a ferric chloride manufacturing process in 1957 and for chrome-bearing wastes in 1959. In 1961, operations reportedly included copper recovery, chrome recovery, zinc solution manufacturing and several other processes. In 1971, facility operations included a zinc sulfate process, and ferric chloride, alkaline and solder etchant manufacturing. As of 1977, operations reportedly included the same processes as 1971, although in different areas, with the addition of a copper leaching area and caustic etchant processes. In 1984, processes included the manufacture of a patented ammonia etchant, and copper oxide, ferric chloride, copper sulfate, and chromic acid solutions from a variety of spent etchant and acid solutions.

1.5 Present Operations

The facility currently employs a variety of operational processes such as reactors, settling tanks, holding tanks, wastewater treatment tanks, filter presses, multi-stage clarifiers, process and storm drain sumps, drum storage areas, and washing areas. Certain waste products are conveyed to the sewer, under a permit with the Los Angeles County Sanitation District. Waste sludge is transported to off-site recycling facilities and/or permitted disposal facilities.

According to the Hazardous Waste Facility Closure Plan (Clayton, June 2002), the facility is entirely paved or covered with coated or uncoated concrete except for the railroad tracks. Currently, portable drip pans are utilized to contain possible incidental leaks during transfer of product from the rail cars. Waste management units at the facility currently consist of storage tanks, treatment tanks, container storage areas, tank truck loading/unloading area, railcar loading/unloading area, and a wastewater treatment area. The waste streams that the facility receives and manages for storage and/or treatment are listed in Table CP-1 of the Closure Plan (Clayton, 2002). Table CP-3 lists the waste management units and maximum inventory, and Figure 2 illustrates the current facility layout . Copies of the tables and figure are provided in Appendix A.

As indicated on Table CP-3 and Figure 2, there are seven operational areas at the facility: the "C" area, the "S" area, the "F" area, the "J" area, the "W" area, and two container storage areas (ERS #1 and ERS #2). Facility processes are briefly described below.

"C" Area - Copper Chloride and Copper Ammonium Chloride Processing

Spent cupric chloride etchants, alkaline copper etchants, and alkaline copper strip etchants are brought by truck and containers to PTI. The wastes are pumped into separate waste storage tanks. From there, the wastes are pumped into reactor vessels for chemical treatment, heating and agitation. The copper oxide produced is decanted and washed to meet product specifications. Decant and wastewater are treated in the on-site wastewater treatment facility. Ammonia evolved during the process is scrubbed with hydrochloric acid to produce raw material for fresh etchant.

"S" Area - Copper Sulfate Processing

Spent copper sulfate plating and etching solutions are transported to PTI by tank truck or in containers. The wastes are temporarily stored and then treated in reactor tanks by the addition of sulfuric acid, copper oxide, copper sulfate crystals, and other appropriate agents as needed. The resultant solution is agitated and pumped into storage tanks through a filtration system and sold as product copper sulfate solution.

"F" Area - Ferric Chloride Processing

Spent ferric chloride arrives on site by either tank truck or in containers. This waste material is stored in hazardous waste storage tanks. The spent material contains copper and other trace heavy metals. Approximately 3,000 gallons are pumped into a reactor vessel which contains iron. As the spent material circulates over the iron, copper and other heavy metals precipitate and the iron is dissolved. Ferrous chloride is produced by this process. It may then be sold or chlorinated to produce ferric chloride. Precipitated heavy metals are sold to smelters.

"J" Area - Various Inorganics Processing

Various inorganic metal-bearing wastes are processed in this area by chemical precipitation. In most cases the precipitating agent is sodium hydroxide, sodium carbonate, or other alkaline material. The resulting solids are filter pressed and packaged for sale.

"W" Area - Wastewater Treatment Area

A wastewater treatment facility began operating on the site in the 1960s. There is incomplete information on the system prior to 1975. Presently, process wastewaters, drum and truck wash water and routine plant clean-up wastes are discharged to four treatment tanks. The system provides batch treatment using sodium sulfide for precipitation. Precipitate is removed using a plate and frame press and sold to smelters. The filtrate discharges to two final effluent holding tanks whose contents are analyzed for compliance with permit parameters before batch discharge to the Los Angeles County Sanitation District.

ERS Areas - Hazardous Waste Container Storage

PTI maintains two hazardous waste container storage areas where containers are stored prior to treatment or being shipped off-site to a designated facility. Containers may be stored longer than 10 days prior to being transported to another facility. Hazardous materials are shipped off-site by flatbed trailers, bulk trailers, and railroad cars to designated recovery or treatment facilities.

1.6 On-Site Extraction Well

Prior to 1985, an extraction well (EX-1) was installed near Pond 1 to remove contaminated groundwater. A well video conducted in September 1990 indicated that the well consists of 6-inch diameter PVC and that the screened interval is 56 to 71 feet. Total depth is 71 feet; thus, the well is screened in the Hollydale aquifer. A nominal amount of sediment was observed near the bottom of the well. The screen appeared to be free of foreign materials and undamaged. The pump, which was removed, was previously set at about 70 feet below ground surface (bgs).

The extraction well was reportedly active for approximately six months between 1985 and 1987. It was reported that the well was typically activated approximately every other day long enough to pump between 5,000 and 10,000 gallons per day. An estimated one million gallons were pumped in all. Pumped water was conveyed to the reactors to be used in processing. Extraction was discontinued when it was realized that contamination from an off-site source was being drawn onto the PTI site (CDM, 1991).

A four-hour step test was conducted in February 1991 to determine an appropriate discharge rate for a future constant-discharge aquifer test. During the test, water levels were measured in both the pumping well and nearby MW-4. Discharge rates were 19.9, 29.5, 40.4, and 58.7 gallons per minute (gpm). The long-term discharge test was conducted in March 1991. The average pumping rate was 49.7 gpm and the pumping duration was 31 hours. Water levels fully recovered in about two hours (CDM, 1991).

1.7 Surrounding Area

The area surrounding PTI has historically been used for industrial purposes. As a result of these activities, several facilities in the vicinity have contributed to what is considered a regional groundwater contamination problem. Regional groundwater constituents of concern consist primarily of chlorinated and aromatic organic compounds.

Copies of aerial photos for the years 1928, 1938, 1947, 1952, 1968, 1976, 1989, and 1994 are provided in Appendix B. The air photos for 1928, 1938 and 1947 show large bulk oil above ground storage tanks surrounding the Site. In the 1952 photo, the bulk oil tanks have been removed. In the 1968 and subsequent air photos, the surrounding area is highly industrialized.

In the late 1950s, industrial warehouses were developed north of PTI. The adjoining property to the north was operated by Witco Products for the manufacture of chemicals. The Witco property is currently vacant. The property to the east, across Dice Road, was undeveloped until 1959. Air Liquide (Liquid Air Inc.) has operated this property since 1983. The adjoining property to the south of PTI consists of a Union Pacific railroad right-of-way.

The Pilot Chemical Company of California (Pilot) is located at 11770 and 11756 Burke Street, and is listed as a RCRA small quantity generator site. This facility is located approximately 0.1 miles north of and up- to crossgradient from PTI with respect to the groundwater flow direction. The primary purpose of this facility is to manufacture detergents.

Review of historical USEPA aerial photographs from the 1950s to 1960s indicated surface staining migrating from the current Pilot facility area to the northwest corner of the property adjacent and to the north of PTI (USEPA, 1988). The nature of this historical spill was not indicated in the USEPA report.

In 1988, five underground storage tanks (USTs) were removed from the Pilot facility. These USTs contained toluene, xylenes, and caustic materials. A soil assessment conducted during excavation and removal activities indicated that these substances were present in soils at the bottom of each excavation. Analyses of these soil samples indicated concentrations of toluene, ethylbenzene, and xylenes (TEX) of up to 12,000 parts-per-million (ppm). Elevated soil TEX concentrations were found in samples collected below the groundwater level. Also, four monitoring wells were installed downgradient of the former USTs. Analyses of groundwater samples from these wells indicated that highest concentrations of TEX were 110,000 parts-per-billion (ppb), 14,000 ppb, and 52,000 ppb, respectively (McLaren Hart, 1994).

According to McLaren Hart (1997), the Pilot facility groundwater currently contains detectable concentrations of volatile organic compounds (VOCs) including carbon tetrachloride, chloroform, 1,2-dichloroethane (1,2-DCA), trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), benzene, ethylbenzene, xylenes (collectively BTEX), and diesel range organics (TPH-diesel). pH conditions are generally near neutral. BTEX concentrations are especially elevated downgradient from the numerous above-ground storage tanks (ASTs) that are present at Pilot. Concentrations of BTEX exceeded 100,000 ug/L in wells immediately downgradient of the ASTs (McLaren Hart, 1991).

Public records databases were searched to determine if enforcement actions had been taken against the Pilot facility. According to the RCRA-SQG, CERCLIS/NFRAP, LUST, UST, ERNS and Spills databases, the Pilot Chemical Company is not classified as a significant non-complier and is not subject to corrective action. However, two ERNS listings were identified for a 400-pound spill of sulfur dioxide in 1991 and a 1,500-gallon dodecylbenzenesulfonic acid spill in 1993.

Techni Braze, Inc. (TBI) is located 0.2 miles north-northeast and up- to crossgradient from the subject property with respect to the direction of groundwater flow. This facility is listed on the SCL, Spills, and RCRA-SQG public-records databases. TBI conducts alloy brazing and heat treatment of metal parts using numerous induction furnaces. The facility has operated since 1966. According to the SCL database, the soil and groundwater have been impacted by VOCs (primarily PCE). Depth to groundwater was indicated to be approximately 32 feet below ground surface (bgs).

The database also reported that the Los Angeles Regional Water Quality Control Board is acting as the lead agency for the site.

In 1991, a release of PCE was discovered at TBI. This release affected groundwater (concentrations up to 14,000 ug/L) and soil (up to 92,000 ug/kg) (Smith-Emery, 1995). PCE had been used as a solvent degreaser on site (Mabbet, Capaccio and Assoc., 1991). A soil vapor survey followed, indicating correspondingly significant PCE concentrations. PCE was detected in all of the soil vapor sampling locations, with concentrations ranging between 0.02 ppm to 1,080 ppm. Highest concentrations were found near a former parts degreaser area, and an existing aboveground PCE storage tank (Kleinfelder, 1991). In 1995, a site investigation was conducted inside the building and along the perimeter of the property (Terra Vac, 1995). Results of this study confirmed the AST as a source of soil and groundwater PCE contamination, and also indicated that PCE contamination has migrated off-site in the downgradient direction.

Due to the highly industrialized nature of the Santa Fe Springs area, it is likely that there are other sites in the area, both known and unknown, with soil and groundwater contamination.

1.8 Production Well Survey

A survey of water supply wells within a three-mile radius of the Site was initially performed during the RFI (refer to Section 4.5.1 and Figure 4-3 of the RFI Report for a discussion of the results of the survey). The survey indicated that there were no active production wells within one mile downgradient of PTI.

A production well survey was performed again in 2003 during the preparation of this SCM, in order to obtain more recent information on nearby production wells and evaluate possible impacts to the wells with respect to the PTI site. The initial step in performing the 2003 survey consisted of contacting Water Replenishment District (WRD) staff to perform a search of the WRD database for water supply wells within a three-mile radius of the PTI facility. Upon completion of the search, WRD staff provided a location map illustrating the locations of all wells within a three-mile radius of the site, in addition to three summary tables. One summary table listed well information (well owner, well number, well status). The second summary table listed monthly pumping data from each well for the period from January 2001 to May 2003. The third summary table listed analytical sampling results for the wells, where available. The information provided by WRD for active drinking water supply wells was generally complete, due to sampling and reporting requirements placed on water purveyors. WRD records for inactive wells and irrigation wells was generally incomplete, and obtaining the missing information required numerous phone calls and letters to well owners/operators, with limited success.

The production well location map provided by WRD is provided in Appendix C. The current discussion focuses on wells located immediately upgradient of the PTI facility, and all wells located within a three-mile radius downgradient of the facility. Given a direction of groundwater flow consistently towards the southwest, all wells within the southwest quadrant of the WRD location map (with PTI as the center), were included in the current evaluation. A summary of well owner, well number, monthly average production, well type, well status, and well construction details (where known), for one upgradient well and 15 downgradient wells is provided in Table 1-1. A summary of VOCs and metals analytical results for groundwater samples collected from the wells, where available, is provided in Table 1-2.

1.8.1 City of Santa Fe Springs

The City of Santa Fe Springs has three wells of interest to the study, one a short distance upgradient and two downgradient from the Site. City staff provided recent water quality results, well construction and operation, and well driller's reports for all three wells. The three wells are discussed below. With well locations illustrated according to WRD number on the radius map in Appendix C.

City of Santa Fe Springs Well No. 1 (WRD Well No. 200022, and also know as 30-R3) is located approximately 1,000 feet north (upgradient) from the center of the PTI facility. This well has a screened interval of 200 to 900 feet bgs, pumps approximately 1,500 gpm, and is screened primarily in sand and gravel. According to City of Santa Fe Springs Department of Public Works personnel, the well is active and water quality is generally good. Analytical results for a sample collected from the well in June 2003 are provided in Appendix C. Methylene chloride (MC) and trichloroethylene (TCE) were detected in the sample at concentrations of 0.81 and 1.40 micrograms per liter (ug/l), respectively. Both concentrations were below their MCLs of 5 ug/l. No other VOCs were detected in the sample. Of the 17 metals analyzed (arsenic, cadmium, chromium, copper, lead, nickel and zinc were included in the analysis), only one metal (selenium at a concentration of 5.0 ug/l) was detected. Based on WRD production records, Well No. 1 is the highest producer of the 16 wells discussed in this section, producing an average 137.83 to 160.77 acre-feet per month during the past few years.

The nearest active downgradient water supply wells are Well No. 4 (WRD Well No. 200235) and Well No. 309 (WRD Well No. 200279). According to City staff, Well No. 4 is a standby well and perforations shallower than 600 feet bgs were sealed in 1991. Analytical results from September 2002 indicate that VOCs, cadmium, chromium, and copper were not detected in the well. Pumping records indicate minimal use of the well during the prior few years.

Well No. 309 is inactive and the pump and motor have been removed from the well. City staff are planning to backfill and abandon the well. Analytical results were not provided in the WRD database for the last few years, indicating that the well is no longer in use. Pumping records also indicate the well has not been pumped for the past few years.

1.8.2 Mutual Water Owners Association of Los Nietos

According to the RFI report, a well (2S/11W-30Q5) operated by the Mutual Water Owners Association of Los Nietos was located on the west side of Norwalk Boulevard, approximately 1,250 feet northwest and crossgradient from PTI. This well is 370 feet deep, and the top of the screened interval starts at 152 feet bgs and extends to an unknown depth. The well was installed in 1951 and served about 96 homes. County Health Department directives dating back to the early 1990's indicated that water from this well was not intended to be used for drinking or cooking due to detections of VOCs in excess of MCLs. Attempts to verify the operation of this well in mid-2003 were unsuccessful. The well was also not included on the WRD location map or listings. The phone number for the association is no longer in service and the association is not listed in the telephone directory. Based on the age of the well, small service area, shallow completion, detection of VOCs exceeding MCLs, and restricted use, it is likely that the well is no longer in service.

1.8.3 Rocky Mountain Water Company

Rocky Mountain Water Company staff were contacted and provided well construction information and analytical results for the year 2003 for their active well (WRD Well No. 200234). As shown on the map in Appendix C, the well is located more than one mile from the Site, and is the closest active downgradient well. As shown on Table 1-1, the monthly average production ranged from 2.15 to 3.98 acre-feet during the past few years. Total chromium was detected at a concentration of 0.0020 mg/l in a sample collected in January 2003. With the exception of a concentration of 1.3 ug/l TCE, VOCs were not detected in the sample. According to the well owner, the 2003 results were typical for prior years. As shown on Table 1-1, the well is perforated in the interval from 300 to 500 feet bgs.

1.8.4 City of Pico Rivera

Well No. 8 operated by the City of Pico Rivera (WRD Well No. 200134) is located approximately 1.5 miles downgradient from the Site. As indicated on Table 1-1, monthly average production during the past few years was minimal, and ranged from 0.1 to 0.07 acre-feet per month. A concentration of 3.1 ug/l PCE was detected in the well during June 2002. According to City Water Quality Specialist Angel Quintero, there have been no water quality exceedences in this well during the past 10 to 12 years.

1.8.5 City of Downey

Two downgradient municipal water supply wells are operated by the City of Downey, approximately 2.5 to 3 miles southwest of PTI. Well 10 (WRD Well No. 200132) is located at 10100 Haledon Avenue, a short distance northeast of the intersection of Lakewood Boulevard and Florence Avenue. The well was drilled in 1952, is 650 feet deep, and is perforated between 380 and 403, 455 and 463, and 600 and 619 feet bgs.

Well 12 (WRD Well No. 200282) is located at 10221 Lesterford Avenue (just south of Florence Avenue and west of the San Gabriel River). The well was drilled in 1950, is 444 feet deep, and is perforated between 301 and 305, and 316 and 352 feet bgs. The pumping rate for Well 10 is 1,400 gallons per minute (gpm) and the pumping rate for Well 12 is 1,800 gpm. According to City staff, the City has a total of 21 wells and does not need to operate all wells at all times. Therefore, pumping from individual wells varies seasonally and yearly, depending on demand.

With the exception of low levels of bromoform and total trihalomethanes (TTHMs), VOCs were not detected in water quality results collected from the two Downey wells in 2002 and 2003. Total chromium, hexavalent chromium, and copper were also not detected in the samples. The analytical reports for the water quality samples collected from Wells 10 and 12 are provided in Appendix C. Lithologic and well construction information for both wells provided by City staff are also provided in Appendix C.

1.8.6 Southern California Water Company

Southern California Water Company (SCWC) operates three wells approximately 2.5 to 3 miles downgradient from the Site. According to WRD information, two wells (WRD Well Nos. 200245 and 200319) are inactive and the third well (WRD Well No. 200284) is active. The active well is reportedly perforated in the intervals from 193 to 198, 277 to 279, and 336 to 364 feet bgs. Monthly average production ranged from 38.04 to 48.83 acre-feet during the past few years. According to water quality information provided by WRD for February 2002, VOCs and hexavalent chromium were not detected. Water quality information was not available for review for the two inactive wells. Based on review of WRD production records, WRD Well No. 200245 was apparently taken out of service in 2001, with WRD Well No. 200319 taken out of service prior to 2001. LA County Department of Public Works staff provided lithologic logs and well construction information for all three SCWC wells (see Appendix C).

1.8.7 Irrigation and Other Wells

Several small capacity irrigation wells are also listed on Tables 1-1 and 1-2. Water quality information was not available for these wells. Little Lake Cemetery (WRD Well No. 200238) and Paradise Memorial Park (WRD Well No. 200281) operate two active irrigation wells. Julian and Helen Hathaway (WRD Well No. 200239) intermittently operate a private irrigation well. No information could be obtained from Whittier Union High School staff regarding their inactive irrigation well (WRD Well No. 200280).

Southern California Edison (SCE) Company staff were contacted regarding two wells (WRD Nos. 200315 and 200316) reportedly operated by SCE. SCE staff reported that they do not have any wells in the area. According to WRD production records, monthly average pumping from WRD Well No. 200315 during the past few years ranged from 0.16 to 2.10 acre-feet. With the exception of the well location shown on the WRD map, WRD did not have any additional information on WRD Well No. 200316.

Table 1-1
Summary of Production Well Information

'RD ID	State Well ID	LADPW ID	OWNER	Well Type	Status	Well Construction Details	Monthly Average Volume Pumped (Acre Feet)[1] 2001	2002	2003	Comments
)022	2S/11W-30R03S		Santa Fe Springs, City of	Production	Active	Perf: 200 - 900 feet bgs	157.05	160.77	137.83	City Well 1, Q=1,567 gpm
)132	2S/12W-35P01S	1585A	Downey, City of	Production	Active	TD=650, Perf: 380-403; 455-463; 600-619 feet bgs	35.81	59.36	69.15	City Well 10, Q = 1,400 gpm
)134	2S/12W-36M06S	1604AB	Pico Rivera, City of	Production	Active	TD=626, Perf: 277-290; 565-584 feet bgs	0.10	0.07	0.10	City Well 8, backup well, Q = 500 gpm
)234	3S/11W-06C03S		Rocky Mountain Water	Production	Active	TD=540, Perf: 300 - 500 feet bgs	2.15	3.98	3.91	
)235	3S/11W-06D03S		Santa Fe Springs, City of	Production	Standby	TD=800, Current Perf: 620 - 760 feet bgs	0.03	0.01	0.02	City Well 4, perfs. <600 feet bgs sealed 1991, Q = 1,200 gpm
)238	3S/11W-06N01S	1626X	Little Lake Cemetery District	Irrigation	Active	TD=650 feet bgs	0.88	1.25	0.17	
)239	3S/11W-06N02S		Julian and Helen Hathaway	Irrigation	Active	Per owner, TD is approximately 300 - 350 feet bgs	0.12	0.14	0.04	Per owner, well was installed before 1938
)245	3S/11W-07E02S	1617N	Southern California Water Company	Production	Inactive	TD=565, Perf: 196-206; 460-472 feet bgs	49.10	0.00	0.00	
)279	3S/12W-01F08S	1605L	Santa Fe Springs, City of	Production	Inactive	TD=1052, Perf: 870-890; 930-1000 feet bgs	0.00	0.00	0.00	City Well 309, pump removed, well will be backfilled.
)280	3S/12W-01G09S		Whittier Union High School District	Irrigation	Inactive	-	0.00	0.00	0.00	Owner's rep. stated they do not have a well
)281	3S/12W-01K09S		Paradise Memorial Park	Irrigation	Active	-	0.08	0.08	0.08	Per owner, well is approximately 100 years old
282	3S/12W-02H04S	1596H	Downey, City of	Production	Active	TD=444, Perf: 301-305; 316-352 feet bgs	2.32	7.09	10.80	City Well 12, Q = 1,800 gpm
284	3S/12W-02R01S	1606U	Southern California Water Company	Production	Active	Perf: 193-198; 277-279; 336-364 feet bgs	48.83	38.04	48.55	
315	3S/12W-11A06S		Southern California Edison Co.	-	Active	-	1.06	2.10	0.16	Owner's rep. stated they have no wells in the area
316	-		Southern California Edison Co.	-	-	-	-	-	-	Owner's rep. stated they have no wells in the area
319	3S/12W-12A02S	1617K	Southern California Water Company	Production	Inactive	TD=252; Perf: 194-218 feet bgs	0.00	0.00	0.00	

information not available from well owner/owner's rep., WRD, or LADWP
) = Water Replenishment District
: total depth Q = pumping rate
= well perforations gpm = gallons per minute
onthly average for 2001, 2002, and January through May 2003

TABLE 1-2
Summary of Production Well Analytical Results

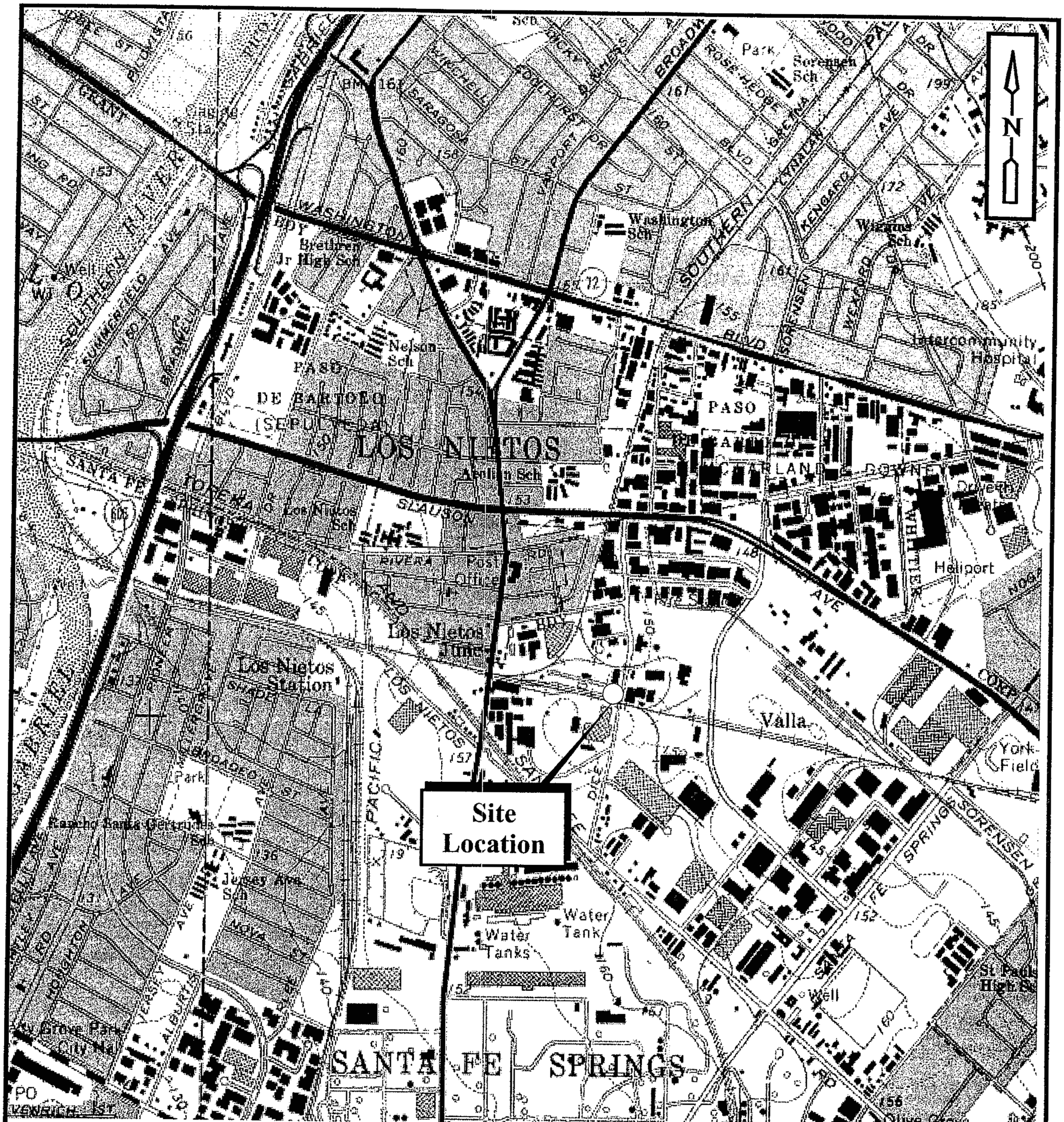
WRD ID	OWNER	Date Sampled	Well Type/Status	VOC Detections	Metals Detections
200022	Santa Fe Springs, City of	June-03	Production/Active	0.81 ug/l MC, 1.40 ug/l TCE,	ND cadmium, chromium and copper
200132	Downey, City of	February-03 (metals) & August-02 (VOCs)	Production/Active	1.2 ug/l bromoform, 1.2 ug/l TTHMs	ND cadmium, total chromium and hexavalent chromium
200134	Pico Rivera, City of	June-02	Production/Active	3.1 ug/l PCE [1]	-
200234	Rocky Mountain Industries, Inc.	January-03	Production/Active	1.3 ug/l PCE, 1.1 ug/l TCE	ND cadmium , 0.0020 mg/l chromium, and ND copper
200235	Santa Fe Springs, City of	September-02	Production/Standby	All VOCs ND	ND cadmium, chromium and copper
200238	Little Lake Cemetery District	-	Irrigation/Active	-	-
200239	Julian and Helen Hathaway	-	Irrigation/Active	-	-
200245	Southern California Water Company	-	Production/Inactive	-	-
200279	Santa Fe Springs, City of	-	Production/Inactive	-	-
200280	Whittier Union High School District	-	Irrigation/Inactive	-	-
200281	Paradise Memorial Park	-	Irrigation/Active	-	-
200282	Downey, City of	August-02 (VOCs) & Oct-2002 (Hex. Cr) & May-02 (Cu)	Production/Active	0.82 ug/l bromoform, 0.82 ug/l TTHM	ND copper, total chromium and hexavalent chromium
200284	Southern California Water Company	February-02	Production/Active	All VOCs ND	ND hexavalent chromium
200315	Southern California Edison Co.	-	- / Active	-	-
200316	Southern California Edison Co.	-	-	-	-
200319	Southern California Water Company	-	Production/Inactive	-	-

= information not available

'RD = Water Replenishment District

THM = total trihalomethanes

= per City Water Quality Specialist Angel Quintero, there have been no water quality exceedences in the well during the past 10 to 12 years.



1,000 0 2,000 ft.

Scale: 1 in. = 2,000 ft.

8851 Dice Road
Santa Fe Springs, CA

Site Vicinity Map

CDM

Figure 1-1

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Section 2
Geology and Hydrogeology

The Site is underlain by a series of Pleistocene alluvial aquifers separated by aquitards composed of fine-grained sediments. The three uppermost aquifers (Gage, Hollydale, and Jefferson) are of particular interest to the SCM. The Bellflower aquiclude and the Gage aquifer are part of the Lakewood Formation, and the Hollydale and Jefferson aquifers (and separating aquitards) are part of the San Pedro Formation (DWR, 1961). Based on Site boring logs (Appendix D), these stratigraphic units generally appear to be continuous and relatively horizontal in the area underlying the PTI site. An east-west cross section illustrating the regional hydrogeology for the area and a fence diagram utilizing Site boring and well logs were provided in the RFI report (Figures 2-1 and Figure 2-2) and are included in Appendix E of this document. Detailed discussions of regional and local geology and hydrogeology were provided in Sections 2.2 and 2.3, respectively, of the RFI Report. Pertinent information from the RFI Report is summarized below.

2.1 Surficial and Shallow Materials

Native surficial materials at the Site are classified as the Bellflower aquiclude (DWR, 1961). Based on evaluation of Site boring logs, the Bellflower aquiclude is approximately 10 to 15 feet thick and consists primarily of clays, silts, silty clays, and sandy clays. Due to the presence of localized coarser-grained sediments (e.g., silt with fine sand at well MW-5, sand at boring PI-5, and silty sand at well MW-1D) within this interval, the uppermost unit underlying the Site will hereinafter be referred to as the Bellflower aquitard. Plate 1 indicates the locations of areas at the Site where coarser-grained materials or fill were indicated on Site boring logs. As shown on the Plate, the majority of these areas were located in the northwestern portion of the Site.

The shallow soils in the vicinity of Pond 1 were noticeably different in character compared to the shallow soils observed throughout the majority of the facility. With the exception of borings PI-6 and PI-7 and monitoring well MW-4, the fine-grained silts and clays observed at the majority of other locations were absent. The RFI report theorized that the fine-grained silts and clays were removed and replaced with more appropriate compactable materials (e.g., sands) prior to construction of Pond 1. Borings PI-6 and PI-7 were located in the roadway, and well MW-4 was located adjacent to the roadway. It would likely not have been necessary to excavate these areas for the construction of Pond 1. It is also possible that the absence of surficial fine-grained materials in the vicinity of Pond 1 represent a localized area within the Bellflower aquitard where coarse-grained sediments were deposited.

The presence of a black slag-like deposit was also observed in the approximate interval from ground surface to seven feet bgs at approximately 20 percent of the locations sampled during the RFI. Based on information collected for the RFI report, this material consisted of foundry sand and was associated with the foundry casting facility reportedly in operation at the Site during the late 1940s and early 1950s. Brick, vesicular glass (slag), and wood were also found associated with the deposits. The only area where these slag-like deposits were not consistently observed was the southern portion of the facility, south of the east-west road.

2.2 Vadose Zone

The vadose zone currently occurs between the ground surface and approximate depths of 45 to 50 feet bgs. The vadose zone at the Site consists of the Bellflower aquitard, the Gage aquifer, and the unnamed fine-grained aquitard beneath the Gage aquifer. Based on Site boring logs, the Gage aquifer is approximately 15 feet thick, occurring generally between 15 and 30 feet bgs. Based on April 2003 water level monitoring results for well location MW-6A, perforated in the interval from 10 to 30 feet bgs, the Gage aquifer is currently unsaturated. Well MW-6A is located along the southern boundary of the Site. Approximately 18 years of monitoring since the well was installed in 1985 have never indicated saturation of the Gage at that location. Water levels at the Site generally rose from the late 1980s through the mid to late 1990s. During this time of historically high groundwater levels, saturation was not observed in the Gage aquifer at the location of MW-6A. Conditions in other portions of the Site are unknown as MW-6A is the only location on Site where the Gage aquifer is monitored.

The aquitard that underlies the Gage aquifer is approximately 20 to 30 feet thick and is primarily composed of silts and clays. Cross-section A – A′ (Figure 2-1) follows a northeast to southwest alignment, goes through several facility process areas (former zinc storage area, former chromic acid UST area, Pond 1 area, and the ferric chloride area). The cross-section is also aligned along the axis of groundwater flow. As indicated on the cross-section, the aquitard thins in the extreme southwestern portion of the Site and appears to be inter-bedded with a coarser-grained sandy unit. In localized areas where the Bellflower aquitard consists of coarser-grained materials, there is the possibility for surface spills or leaks to migrate vertically to the unsaturated Gage aquifer (or saturated Gage aquifer in the event it saturates at some future time), where contaminants may then migrate both laterally and vertically. In the event that the Gage becomes saturated in the future, the orientation of the top of the aquitard underlying the Gage aquifer will affect groundwater flow. If the top of the aquitard is relatively flat, this would minimize the possibility of contaminant migration. If the top of the aquitard is sloped and dips in one direction, this would increase the possibility for contaminant migration in the direction of the dip.

The upper surface elevation of the aquitard underlying the Gage aquifer was plotted to determine if a gradient exists (Figure 2-4). Only wells where the contact was directly observed in lithologic samples or where the contact could be extrapolated based on 1.5-foot long split-spoon samples collected at five-foot intervals were utilized. The contact between the Gage aquifer and the underlying aquitard was observed or extrapolated at depths ranging from approximately 25 to 30 feet bgs. Based on Figure 2-4, no significant gradient exists, as the upper surface is fairly level and occurs at an elevation approximately 120 to 123 feet above MSL. As shown on

Figures 2-1 and 2-2, the bottom of the unnamed aquitard, and therefore its thickness, has been estimated based on a limited number of data points.

Quantitative laboratory moisture data are available for nine soil samples collected from the vadose zone in the area of the former fuel UST area during the RFI. Moisture contents of two samples collected from the Bellflower aquitard were 12 and 15 percent (see RFI Table 4-7). In five samples collected from the unsaturated Gage aquifer, moisture contents ranged from 5 to 13 percent. Moisture content increased in two samples collected from the aquitard beneath the Gage aquifer. A moisture content of 17 percent was reported for a sample collected from a depth of 32 feet bgs (UST-SB4), with 21 percent reported for a sample collected from a depth of 37 feet bgs (UST-SB3). Moisture content in four samples collected during the Phase II RFI (boring MW-16) in the interval from 10 to 65 feet bgs ranged from 7.0 to 15.1 percent (see Phase II RFI Table 4-6 for moisture content and other soil characteristics). Qualitative data from boring logs indicate moisture content of the vadose zone ranged between "dry" and "damp," which is typical for an unsaturated soil.

Saturation of the Gage aquifer was not noted on any of the soil boring locations advanced during the extensive RFI drilling program. At one location (PI-5), locally wet materials were noted at approximately 15 feet bgs. According to the field geologist who logged the boring, the "locally wet" qualifier indicated the presence of higher moisture content in small, localized portions of the sample. If saturation had been observed (and it was not), it would have been indicated on the boring log for the location. At some locations (e.g., UST-SB4 and WMU46-SB2), "wet" sediments referring to the presence of petroleum product were also noted in the vadose zone.

2.3 Hollydale and Jefferson Aquifers

The Hollydale aquifer is composed of sands, silty sands, and occasional gravels. The aquifer is saturated and is approximately 40 feet thick beneath the Site.

As illustrated on Figures 2-1 and 2-2, three well locations (MW-6D, MW-13D, and MW-14D) illustrate the depth of the top and bottom, and thickness of the Hollydale aquifer underlying the Site. An aquitard of varying thickness separates the Hollydale aquifer from the deeper Jefferson aquifer. The Jefferson aquifer varies regionally in thickness from 10 to 140 feet (DWR, 1961), and is composed primarily of fine sands with occasional gravels. Soil samples confirmed the presence of the aquitard underlying the Hollydale aquifer in six of the deep well borings, where silts, silty clays, and clays were observed at depths corresponding to the base of the lower Hollydale.

With the exception of well MW-6A that is screened in the unsaturated Gage aquifer and one other possible exception (MW-15D), all of the Site wells are screened in the Hollydale aquifer. Sixteen wells (MW-1S, MW-2, MW-3, MW-4, MW-5, MW-6B, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12S, MW-13S, MW-14S, MW-15S, and MW-16) are screened in the upper portion of the Hollydale aquifer. Screen lengths in the shallow wells typically range from 20 to 30 feet. Six wells (MW-1D, MW-4A, MW-6D, MW-12D, MW-13D, and MW-14D) are installed in the lower portion of the Hollydale aquifer. Screen lengths in the deeper wells are 15 feet, with the exception of MW-4A where the screen is 20 feet in length. Screen lengths for all wells are summarized in Table 5-1 in Appendix F. Depending on site-specific conditions (e.g., vertical extent of contamination, subsurface lithology, source and type of contamination, etc.) wells with longer screened lengths may yield results with relatively less contaminant concentrations than wells with shorter screened lengths completed in the same aquifer. Differences in screen lengths may not be as important a consideration where contaminants are being monitored solely in the dissolved phase.

As was observed for the aquitard separating the Gage aquifer from the Hollydale aquifer, the aquitard separating the Hollydale aquifer from the Jefferson aquifer also appears to thin in the extreme southwestern portion of the Site. Although silty materials were noted at depths of 100 and 105 feet bgs in the MW-15D boring, clay was not observed and the silt thickness was not considered sufficient to indicate the existence of an effective aquitard in this area. Well MW-15D is the deepest Site well, and is perforated in the interval from 108.5 to 123.5 feet bgs. The other deep Site wells are perforated to maximum depths ranging from approximately 93 to 107 feet bgs. The RFI Report theorized that the Hollydale and Jefferson aquifers were possibly merged in the extreme southwestern portion of the Site. Well MW-15D, therefore, is possibly screened in the merged lower Hollydale/upper Jefferson aquifers. As no Site wells penetrate the Jefferson aquifer, site-specific information on the depth and thickness of the Jefferson aquifer underlying the Site is not known.

Hollydale aquifer parameters were calculated through aquifer testing performed during the RFI. Transmissivity values ranged from 16,500 gallons per day per foot (gpd/ft) in the upper Hollydale aquifer at the location of MW-4 to 99,000 gpd/ft at the location of well MW-14S. Storage coefficients ranged from 0.01 to 0.009. Storage coefficients of most confined aquifers typically range from about 0.00001 to 0.001, whereas most unconfined aquifers typically range from 0.1 to 0.3. Hydraulic conductivity values varied from 412 to 2,300 gdp/ft2, which falls within the expected range for similar types of materials.

Based on the analyses performed, the Hollydale aquifer appears to be a leaky confined aquifer in the area beneath the Site. The Hollydale aquifer, therefore, may gain/lose water from/to the underlying Jefferson aquifer, particularly in the southwestern portion of the Site where the aquifer appears to be merged with the Jefferson (CDM, 1991). The Hollydale aquifer may also be semi- to unconfined in the southwestern portion of the Site where the aquitard underlying the Gage aquifer is of negligible thickness and interbedded with coarser-grained materials.

2.4 Water Level and Groundwater Flow Direction

Recent depth to water measurements and groundwater elevations for Site wells were summarized in Table 5-1 of the April 2003 Quarterly Groundwater Monitoring Report (CDM, July 2003). During the April 2003 monitoring event, depth to water in Site wells ranged from 43.98 feet bgs (MW-6B) to 49.35 feet bgs (MW-11). Figures 5-1 and

5-2 illustrating groundwater contours and direction of flow for shallow (upper Hollydale) and deep (lower Hollydale) Site wells were also provided in the quarterly report. Groundwater flow direction in the shallow wells during April 2003 was to the southwest at an average gradient of 0.43 feet per 100 feet. Groundwater flow direction in the deep wells was also towards the southwest and at an average gradient of 0.43 feet per 100 feet. Figures 5-1 and 5-2 and Table 5-1 from the quarterly report are provided in Appendix F of this document.

Monitoring performed since 1985 has indicated a groundwater flow direction that is consistently towards the southwest. Beginning in 1991, groundwater elevation at PTI rose in response to abnormally large amounts of precipitation that began in late 1990 (Figure 4, Appendix G). Precipitation rates returned to normal in about 1998, causing water levels to return to pre-1991 levels in about 1999.

Quarterly monitoring reports for the Site routinely include figures illustrating hexavalent chromium, total chromium, and cadmium concentrations vs. water levels for well MW-4. Owing to the location of well MW-4 adjacent to Pond 1 and downgradient from the former chromic acid UST, and historical and current detections of hexavalent chromium, total chromium, and cadmium in the well, it was selected as the "key" well for evaluating trends in water levels at the Site. The project database does not include historical water levels for the remaining Site wells, therefore, only the water level plots for MW-4 have been included in this document.

Review of water level for well MW-4 (Appendix F) for the period from January 1989 through April 2003 indicates that a delayed reaction occurs as the greatest amount of precipitation typically falls in the winter months, but highest groundwater levels occur generally in mid summer months. The delay between the occurrence of precipitation and corresponding response in the Hollydale aquifer at the site suggests that recharge to the Hollydale aquifer occurs upgradient and not on site, and the groundwater under the site is recharged by through-flow.

2.5 Storm Water

All storm water which falls within process and chemical storage areas of the Site is retained, reused to the fullest extent possible, and treated on-site before being discharged to the Los Angeles County Sanitation District system.

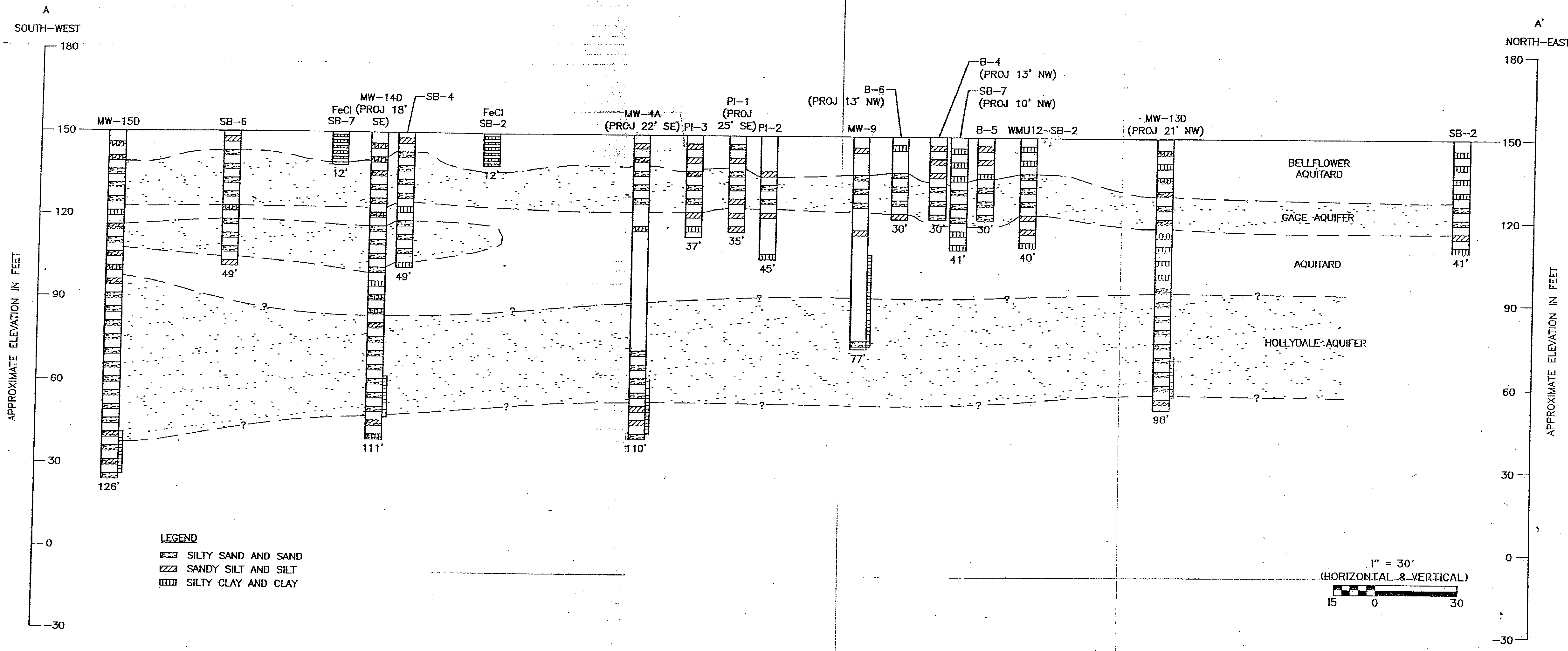
The natural slope of the site is from north to south, with a centrally located main collection sump, which collects rainwater. The southern portion of the site has been modified in areas so that the terrain slopes north to the central collection sump. Most of the site is sloped such that all rainwater collects in the main collection sump. Arrows indicating the direction of surface flow during rain events and containment features (e.g., berms, asphalt and concrete paving, walls, etc.) are indicated on Plate 1.

The concrete curb along the north, east, and west sides of the property is generally in good condition and is serviceable. Asphalt berms on the south side of the property are also in good and serviceable condition. In the past, the area by the maintenance shop did not have a containment berm, and rainwater was allowed to flow off-site and into the adjacent drainage ditch.

The general overall condition of the concrete and asphalt ground cover is good. Where areas are covered with asphalt, the asphalt is either relatively new (less than 2 years old) or had recently been slurry sealed. All asphalt, including berms, was serviceable and appeared to be sufficiently sealed to inhibit infiltration. The concrete in general is in good and serviceable condition.

The property to the northeast of the Site has a history of shedding rainwater onto the property. To prevent this, a retention wall was installed to divert rain run-off to a drain line installed beneath PTI's main access driveway. The southeast portion of the facility (main office trailer, employee parking lot, and truck scales) is isolated from the process and chemical storage areas of the facility by secondary containment berms and does not receive runoff from these areas.

The only area of the property not covered with a layer of concrete or asphalt is the rail spur on the south side of the facility. Ground cover at the rail spur consists of crushed rock ballast for the railroad tracks. In the past, buckets were reportedly used by staff to contain incidental leaks. Currently, portable drip pans are utilized to contain incidental leaks during transfer of product from the rail cars.

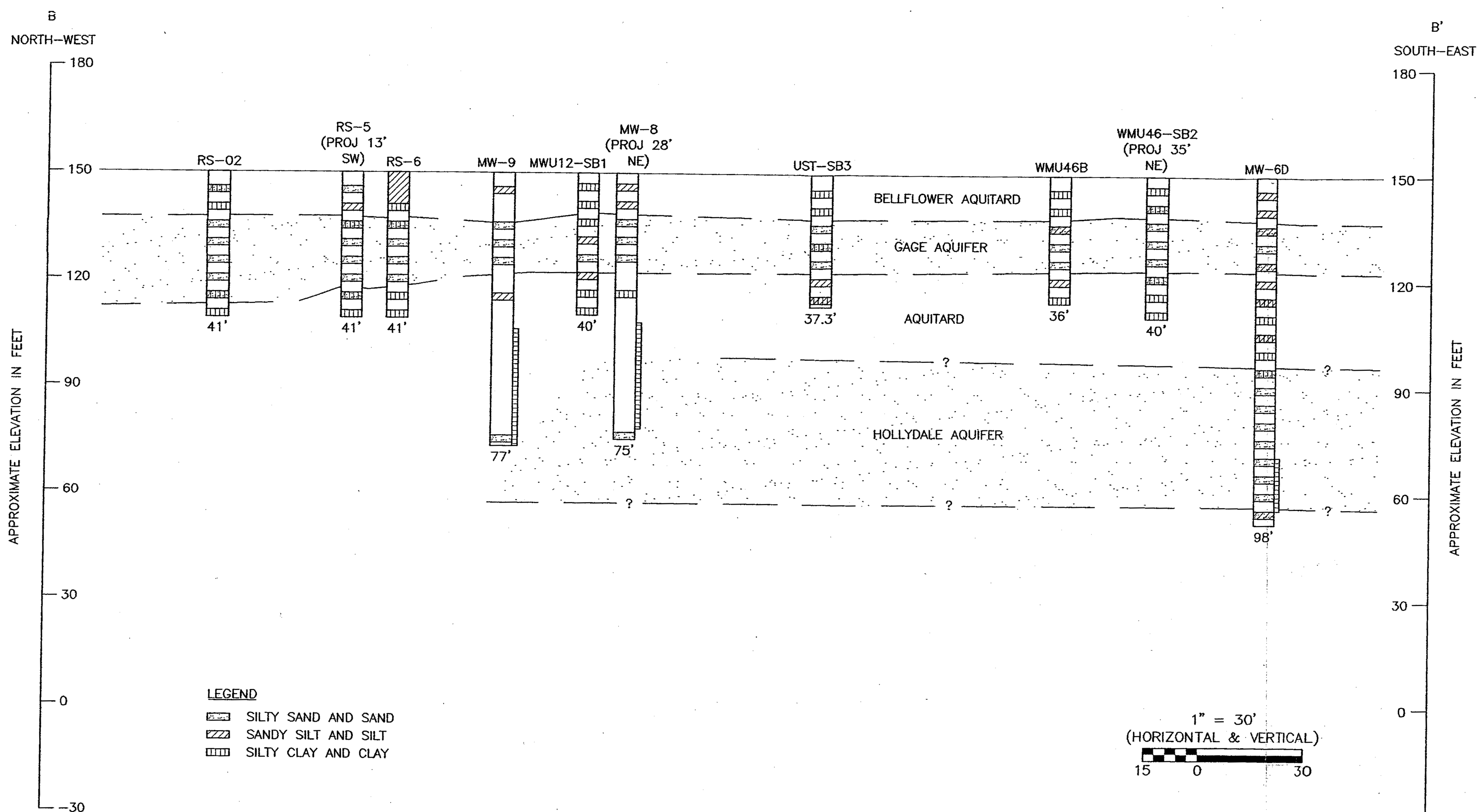


CDM

PHIBRO-TECH, INC.
SANTA FE SPRINGS, CA

GENERALIZED SUBSURFACE CROSS SECTION A-A'

Figure 2-1



CDM

PHIBRO-TECH, INC
SANTA FE SPRINGS

GENERALIZED SUBSURFACE CROSS SECTION B-B'

Figure 2-2

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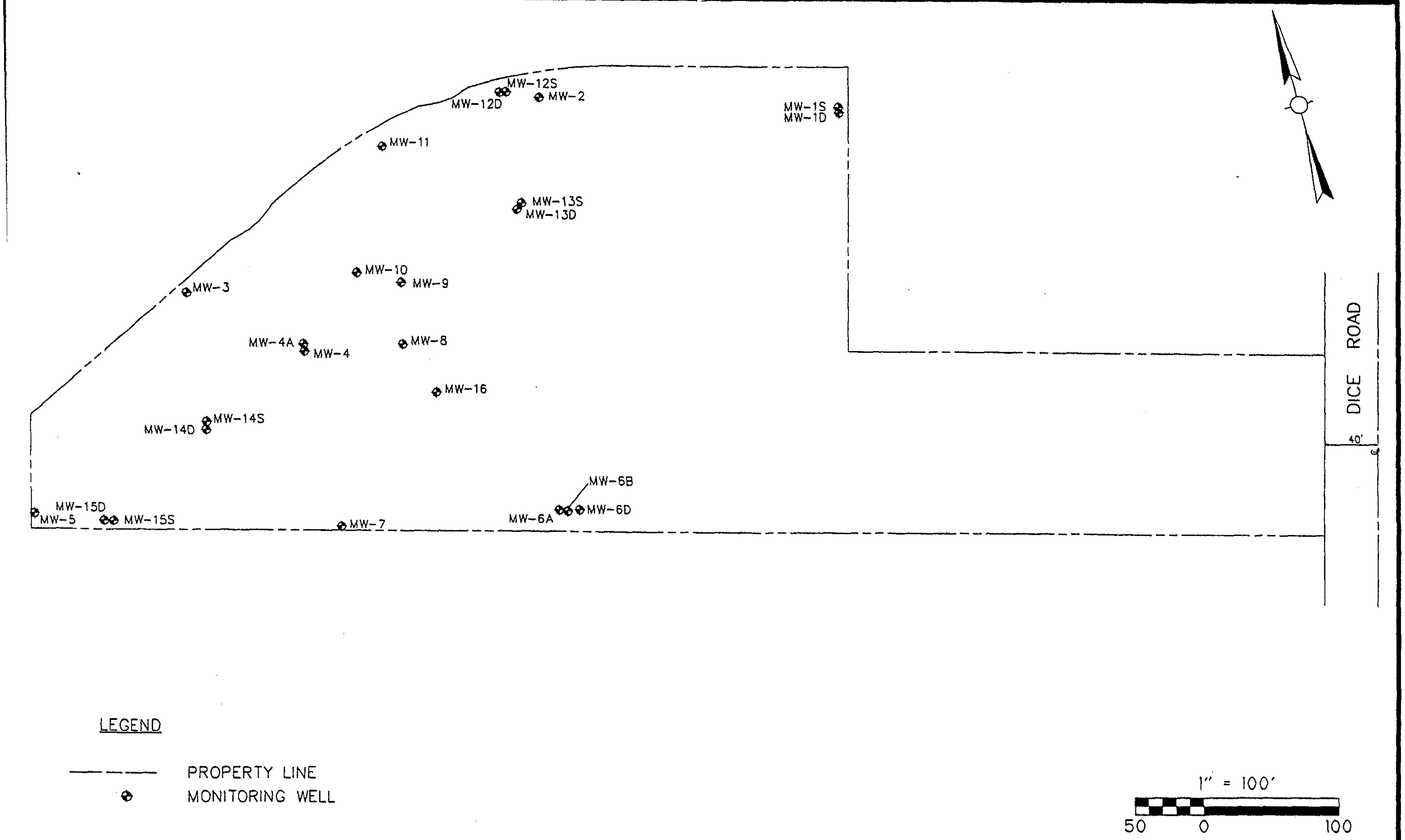

PHIBRO-TECH, INC., SANTA FE SPRINGS, CA

MONITORING WELL LOCATION MAP

CDM
environmental engineers, scientists, planners, & management consultants

Figure 2-3

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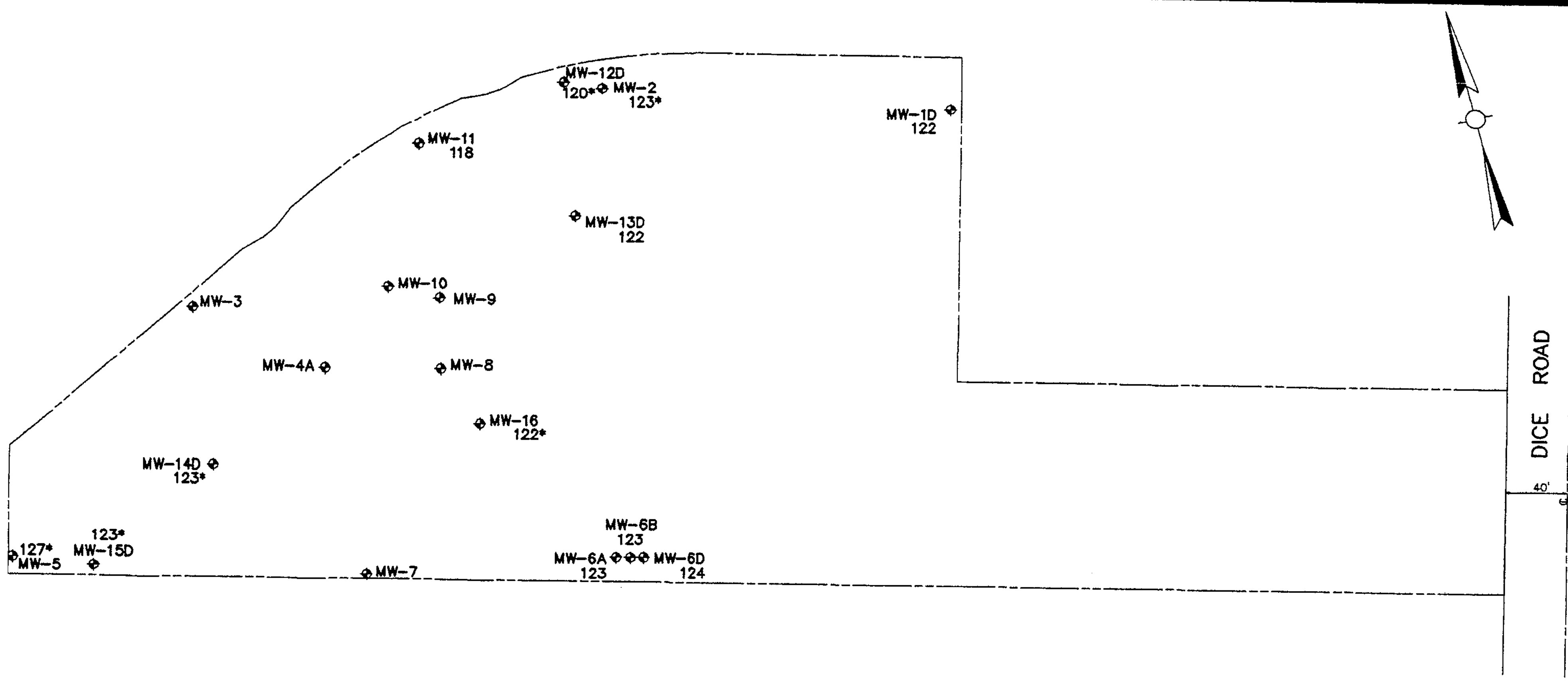

LEGEND

———	PROPERTY LINE
⊕	MONITORING WELL
124	TOP OF AQUITARD ELEVATION (FEET ABOVE MSL)
*	EXTRAPOLATED BETWEEN 5-FOOT SAMPLES

1" = 100'

50 0 100

PHIBRO–TECH, INC., SANTA FE SPRINGS, CA

Approximate Elevation of Top of Aquitard
Underlying the Gage Aquifer

CDM
nvironmental engineers, scientists,
anners, & management consultants

Figure 2-4

Section 3
Distribution of Contaminants in Soil Gas, Soil Matrix, Groundwater, and Surface Water

This section illustrates the results of prior soil investigations, with the results illustrated on Plates 1 through 7. Graphics illustrating soil vapor sampling results from the Final Phase I Corrective Action Soil Vapor Survey Report are provided in Appendix E. Tables summarizing historical and current groundwater sampling results are provided in Appendix F. Time series plots for all VOCs detected in groundwater in all on-Site wells, and time series plots for cadmium, total chromium, hexavalent chromium, and TCE for the majority of the sampled Site wells are also provided in Appendix F.

3.1 Soil Gas Contaminant Distribution

CDM completed a soil gas investigation in the northwest portion of the Site during 2001 (CDM, 2001). Samples were generally collected to maximum depths of 25 to 28 feet bgs and analyzed on site for a suite of VOCs. Additional samples were also taken in Summa canisters, which were analyzed according to USEPA Method TO-14A. Analytical results are summarized in Table 3-1, Appendix E.

Samples from depths of 5 feet bgs were generally collected from finer-grained materials representing the Bellflower aquitard, with samples collected from 18 and 25 to 28 feet depths generally collected from coarser-grained materials representing the unsaturated Gage aquifer. One sample (SV-17) was collected from a depth of 40 feet bgs in the fine-grained aquitard underlying the Gage aquifer.

The Final Phase 1 Corrective Action Soil Vapor Survey (SVS) Report (CDM, November 2001) illustrated the findings of the investigation in detailed figures and cross-sections. Figures 3-1 through 3-13 from the SVS report have been provided in Appendix E. The locations of the current site features discussed below are illustrated on Figure 3-11, Appendix E.

The shallow TCE footprint extends NE-SW approximately between the spent container storage area (SCSA) and plate-and-frame filter press (Figure 3-7, Appendix E). Concentrations range up to 62 ug/L (vapor; ppbv) southwest of the SCSA. The deeper footprint extends NE-SW approximately between the SCSA and the southern end of Pond 1 (Figure 3-8, Appendix E). Concentrations of up to 452 ug/L occur underneath the SCSA.

1,1-DCE was detected in shallow soil gas samples, creating a footprint which trends NE-SW between the SCSA and Tank ST-1 (Figure 3-3, Appendix E). Concentrations range up to 6.8 ug/L under the SCSA. In deeper samples, the overall footprint trends

NE-SW between the SCSA and the boilers (Figure 3-4, Appendix E). Concentrations of up to 330 ug/L were detected northeast of the production manager's office.

1,1-DCA occurs in shallow samples such that the overall footprint extends NE-SW in the approximate area between the SCSA and the plate-and-frame filter press. Maximum concentrations of up to 8.3 ug/L occur near the spent container storage area. Concentrations in deeper samples form an overall footprint extending between the SCSA and the boilers (Figure 3-5, Appendix E). Concentrations up to 330 ug/L were detected just north of the former chromic acid UST. Deep sample results are illustrated in Figure 3-6, Appendix E. The deeper soil vapor plume is more laterally extensive than the shallow plume.

The lateral distribution of 1,1,1-TCA in shallow samples extends between the area southwest of the SCSA and Tank ST-1 (Figure 3-9, Appendix E). A maximum concentrations of 3.4 ug/L was detected east of Tank ST-1. In deeper samples, the footprint extends between the ammonia tank and the area north of the plate-and-frame filter press (Figure 3-10, Appendix E). A maximum concentration of 310 ug/L was detected just north of the former chromic acid UST. The vertical distribution of selected chlorinated compounds and total VOCs is illustrated on two cross-sections (Figures 3-12 and 3-13, Appendix E).

Benzene, toluene, ethylbenzene, and total xylenes (BTEX) were detected in soil vapor samples less frequently and at lower concentrations compared to chlorinated VOCs. A maximum benzene concentration 8.6 ug/l was detected at a depth of 18 feet bgs at location SV-18, located northwest of the former fuel UST area. A maximum toluene concentration of 11 ug/l was detected at as depth of 18 feet bgs at location SV-17, located north of the former chromic acid UST. Maximum concentrations of 8.1 ug/l m,p-xylenes and 3.5 ug/l ethylbenzene were detected at a depth of 25 feet bgs at location SV-18.

A comparison of soil vapor and groundwater VOC concentrations is provided in Table 4-1, Appendix E. Evaluation of the results summarized in the table indicates that there were individual VOCs in soil vapor that were not detected in the underlying groundwater, and vice versa. The results suggest that at least some of the VOCs in soil vapors are due to off-gassing from groundwater. This is particularly true of the results near well MW-11, where the soil vapor and groundwater VOC patterns match closely. Locations where VOCs were detected in site soil samples at various depths are discussed below.

3.2 Soil Matrix Contamination

In 1986, 19 soil borings were advanced on site with selected soil samples analyzed for pH, cadmium, chromium, copper, zinc, nickel, chloride, sulfate, ammonia nitrogen, and carbonate (Kleinfelder, 1986). Soils analytical results from the 1986 investigation are provided in Appendix E. Thirteen of the borings were converted to groundwater monitoring wells (MW-1 through MW-11), with well pairs installed at two well locations (MW-4/MW-4A and MW-6A/MW-6B).

The 1991 RFI included a major soil sampling program that involved sample locations across the entire site. A Phase II RFI was subsequently performed in several areas of interest (former Fuel UST area, copper cement pond area, waste acid tank area, drum storage area, and the parking lot west of the facility lab) identified during the initial RFI. The majority of the samples were analyzed for selected metals (cadmium, total and hexavalent chromium, copper, iron, nickel, lead, and zinc) and pH. Selected samples were also analyzed for arsenic, cyanide, mercury, purgeable aromatic and chlorinated volatile organic compounds (VOCs), total extractable petroleum hydrocarbons (TEPH), and polychlorinated biphenyls (PCBs). VOC analyses were performed at all "Profile" boring locations, where a full suite of analyses were performed in accordance with the RFI Work Plan. Additional samples for VOC analysis were also selected based on elevated field screening results performed during drilling and sampling using a photoionization detector (PID).

The soil sampling results from the Kleinfelder and RFI investigations are illustrated on Plates 2 through 7. For the purposes of the following discussion, soil sample results have been organized into two categories, as follows: shallow soil samples collected from ground surface to a depth of 14 feet bgs, and deep soil samples collected from depths greater than 14 feet bgs. The "shallow" soil samples generally correlate to the Bellflower aquitard, with "deeper" soil samples generally collected from units underlying the Bellflower aquitard. Plates 2 and 3 illustrate shallow and deep chlorinated VOC results, respectively. Plates 4 and 5 illustrate shallow and deep aromatic VOC and TEPH results, respectively. Plates 6 and 7 illustrate shallow and deep metals and pH results, respectively. Analytical summary tables from the RFI investigation are also included in Appendix E.

3.2.1 Metals and pH

A statistical analysis of off-site background metals data was performed to determine the 95 percent Confidence Prediction Limits for background metals concentrations. CDM performed the statistical analysis using analytical results from background (off-site) soil boring locations sampled during the RFI. Background sampling locations are illustrated on Figure 3-2, with the results summarized in Table 4-1 (both the figure and table are provided in Appendix E).

The statistical evaluation was performed using the Compliance and Remediation Statistics (CARStat) software. A detailed explanation of the software and statistical methods used is presented in Gibbons (1994). The prediction interval is a method that is typically used in compliance monitoring to compare on-site analytical data to background analytical data. The prediction interval represents the range for which the next measurement will be contained at a specified confidence level. For instance, an upper prediction limit (UPL) with 95 percent coverage and a 95 percent confidence level represents a value which, with 95 percent confidence, any new background measurement will be exceeded less than 5 percent of the time.

For this evaluation, CDM has calculated UPLs using the background soils data and compared these values to the on-site analytical results (the average concentration is presented in Table 2) using a confidence level of 95 percent. When on-site data exceed the background UPL, it suggests that a significant difference from background may exist.

The statistical evaluation results are presented in Appendix H, Tables 1 through 5. These tables include all of the tabular data output from the CARStat evaluation. Table 1 lists the background soils data that were used to calculate the UPLs. Table 2 lists the on-site data (average concentrations). The frequencies of detection for each parameter in the background and on-site data sets are provided in Table 3. Table 4 lists the background soils data distribution results, based on the Shapiro-Wilk test for normality. Table 5 presents background soils data summary statistics, including the prediction limit and associated confidence level. A UPL calculation sheet for each compound is also included in Appendix H.

As shown on Table 5 in Appendix H, the 95 percent Confidence Prediction Limits for background metals are as follows:

- Cadmium 0.14 mg/kg
- Hexavalent Chromium 60.50 mg/kg
- Total Chromium 43.67 mg/kg
- Copper 44.45 mg/kg
- Lead 22.00 mg/kg
- Nickel 32.77 mg/kg
- Zinc 366.94 mg/kg

The 95 percent Prediction Limits listed above will be compared to site-specific soil sample analytical results for cadmium, hexavalent chromium, total chromium, copper, lead, nickel, and zinc. Arsenic was not included in the above analysis because although it was analyzed at a limited number of RFI boring locations, it was not analyzed at the off-site background sampling locations. Arsenic results are summarized in Table 4-4 of Appendix E, and are also illustrated on Plates 6 and 7. An average on-site arsenic concentration of 14.5 mg/kg was calculated based on the results summarized in Table 4-4 (non-detections were not factored into the average as the detection limits were not shown on the table). The average arsenic value is believed to be conservative and will be used in the discussions below to evaluate whether arsenic is a potential chemical of concern (COC). Additional discussion regarding arsenic and hexavalent chromium is provided in Section 3.5.

The following discussion has been organized into Areas of Concern (AOCs) where metals concentrations above the 95 percent Prediction Limits (and arsenic above it's on-site average) were detected in Site soils. A brief discussion of each AOC is also included below.

Pond 1 Area
Pond 1 is an inactive surface impoundment that currently serves as secondary containment for two wastewater tanks (W-1 and W-2) that are part of the facility's wastewater treatment system. Pond 1 was constructed in 1975 by modifying the former Pond 8, which had also been used for wastewater treatment. Pond 1 was constructed by adding an additional 6-inch thickness of steel-reinforced concrete and extending the walls. The dimensions of Pond 1 are approximately 37 feet by 37 feet. The Pond extends partially below grade and has a capacity of 36,000 gallons. Pond 1's use as a surface impoundment was discontinued in July 1985. Shortly thereafter, it was put into service as secondary containment for wastewater tanks W-1 and W-2. Pond 1 has been identified as an AOC at the Site.

Soil samples were collected from 3 borings located within Pond 1 (PI-1, PI-2, and PI-3), and six borings adjacent to Pond 1 (PI-4, PI-5, PI-6, PI-7, B-1, B-2). Soil samples were also collected from three monitoring wells located adjacent to Pond 1 (MW4, MW4A, and MW10).

Shallow Soils
As illustrated on Plate 6, elevated metals above the prediction limits were detected in shallow soils underlying Pond 1 (see borings PI-1, PI-2 and PI-3). The metal found at the highest concentrations in the three borings was total chromium, with a maximum concentration of 37,000 mg/kg detected at a depth of 2.5 feet bgs in boring PI-1. The concentration of total chromium declined to 894 mg/kg in the soil sample collected from a depth of 12 feet bgs in the boring. pH values were also observed to decline from 10.0 to 4.1 within the same interval.

Hexavalent chromium concentrations observed at the three boring locations within Pond 1 were generally orders of magnitude lower than the total chromium concentrations. Hexavalent chromium was detected above the prediction limit at a depth of 12 feet bgs in boring PI-1 and 0.5 feet bgs in boring PI-3 (concentrations of 94.5 and 143 mg/kg, respectively). Cadmium was detected in six of the 12 shallow samples, with a maximum concentration of 5.1 mg/kg detected in boring PI-1 at a depth of 2.5 feet bgs. Copper, nickel and lead were also detected at concentrations greater than the prediction limits in the three borings. Zinc concentrations did not exceed the prediction limit.

A comparison of the results from the adjacent boring locations (PI-4 through PI-7, and B-1) with the results from the interior Pond 1 boring locations shows that cadmium, chromium, copper, nickel, and lead were also detected at concentrations above the prediction limits. Unlike the interior boring locations, however, zinc was detected in the adjacent borings at concentrations above the prediction limit and hexavalent chromium was not.

An arsenic concentration of 72 mg/kg was detected at a depth of 2.5 feet at boring location PI-1. Arsenic was detected in 26 of the 50 samples collected for arsenic analysis during the RFI, and this was the maximum reported concentration for the on-site samples. The concentration rapidly declined to 21 mg/kg at a depth of 3 feet bgs in boring PI-1. Both these concentrations exceeded the average concentration of 14.5 mg/kg for on-site soils.

Deep Soils

Metals and pH results from soil samples collected at depths in excess of 14 feet bgs within and in the immediate vicinity of Pond 1 are illustrated on Plate 7. Comparable to the shallow soil samples, cadmium, hexavalent chromium, total chromium, copper, nickel, and lead were found at concentrations exceeding their respective prediction limits. Detected concentrations were generally less in the deeper samples compared with the shallow samples. pH values at interior Pond 1 locations PI-1, PI-2, and PI-3 were generally observed to steadily decline with increased depth (e.g., pH value of 10.0 at 2.5 feet bgs in boring PI-1 declined to 3.6 at a depth of 37 feet bgs). This trend was also observed at boring location PI-7. The possible significance of this finding will be discussed in Section 4 of this document.

Arsenic concentrations in samples collected from boring PI-1 in the interval from 17 to 37 feet bgs ranged from 3.30 mg/kg at a depth of 17 feet bgs to 19.20 mg/kg at a depth of 37 feet bgs.

Former Chromic Acid UST

A fiberglass 3,000-gallon UST (WMU12) was removed from the site in approximately 1981. The UST formerly contained a low pH chrome etching solution which was a mixture of chrome, copper, chloride, ammonia, nitrogen, and sulfate (Kleinfelder, 1986). The UST was located just southwest of the present location of the ammonia AST, and was installed to a depth of 8 feet bgs. Four soil borings (B-3 through B-6) were advanced to depths ranging from 15 to 25 feet bgs in the immediate area of the former UST during the Kleinfelder investigation. Boring SB-7, a profile location where additional analyses were performed, was placed at the approximate location of boring B-5. During the Phase II RFI, two additional borings were advanced north and south of the area to evaluate the extent of contamination associated with the former chromic acid UST. All three RFI borings were advanced to a depth of 40 feet bgs.

Shallow Soils

At location SB-7, cadmium, hexavalent chromium, total chromium, copper, nickel, lead, and zinc were detected in shallow soils at concentrations exceeding their respective prediction limits. Total chromium and copper concentrations also exceeded their prediction limits at boring locations B-2 through B-6. Boring locations SB-7 and B-4, which were located closest to the former chromic acid UST, were the locations where total chromium concentrations were most elevated. A maximum total chromium concentration of 12,000 mg/kg was detected at a depth of 5.5 feet bgs in boring SB-7, with 16,000 mg/kg detected at a depth of 10 feet bgs in boring B-4. Arsenic was also detected at a concentration of 15 mg/kg, just slightly above the on-Site average, at a depth of 3.5 feet bgs in boring SB-7.

Deep Soils

Total and hexavalent chromium were detected at elevated concentrations throughout the entire drilled depth (40.5 feet bgs) of boring SB-7. pH values declined fairly steadily from 7.5 at a depth of three feet bgs to 3.3 at a depth of 30.5 feet bgs. At 40.5 feet, pH increased to 6.5. At boring location B-4, pH was also low, ranging from 4.6 at a depth of 5 feet bgs to 4.0 at a depth of 10 feet bgs. At location B-5, a short distance north of the former chromic acid UST, the soil sample collected from 15 feet bgs contained higher total chromium and copper concentrations and lower pH compared to the shallow samples collected from 5 and 10 feet bgs in the boring. As discussed in Section 4, the former chromic acid UST is believed to be the source of the elevated chromium and low pH detected in deep soils underlying the Pond 1 area.

Hexavalent chromium was not detected in Phase II RFI borings WMU12-SB1 and WMU12-SB2 to depths of 40 feet bgs. Cadmium, chromium, copper, and nickel concentrations slightly exceeded of their respective prediction limits at these two locations. In addition, pH values ranged from 6.5 to 7.8.

Arsenic was not detected in samples collected from boring SB-7 at depths of 15.5, 20.5, and 30.5 feet bgs. It was detected at a concentration of 31.00 mg/kg in the sample collected at a depth of 40 feet bgs, but was not detected in the sample collected at 40.5 feet bgs.

Former Fuel UST

Two fuel USTs were removed from the Site in July 1989. One tank contained diesel, one gasoline, and each had a 10,000-gallon capacity. The excavation was reportedly 12 to 15 feet deep, 25 feet wide, and 35 feet long. The excavation was reportedly backfilled with clean fill dirt after the completion of RFI field sampling activities (personal communication between Mr. Mark Alling and Mr. Ed Vigil, March 14, 2002).

With the exception of boring UST-SB7, soil samples for metals analysis were not collected from the former fuel UST area borings. Three samples were collected from boring UST-SB7 at depths of 5.5, 17, and 40.5 feet bgs and analyzed for arsenic. Concentrations of 4.9, 4.1, and 18 mg/kg were reported for the three samples. The concentration of arsenic in the 40.5 feet bgs sample slightly exceeded the average concentration for on-site soils.

Total and hexavalent chromium were also analyzed from samples collected from boring UST-SB7 at depths of 4.5, 15, and 34.5 feet bgs. A maximum concentration of 22.1 mg/kg total chromium was detected in the sample collected from a depth of 4.5 feet bgs. Hexavalent chromium was not detected in any of the samples.

Former Copper Cement Pond Area

The area generally bounded by the "C" process area to the west, the facility maintenance shop to the east, the facility roadway to the north, and the railroad tracks to the east was formerly used as a copper cement drying area. The area consisted of six ponds which were used for drying copper cement product from the 1960s to the 1980s. Several of the ponds were reportedly constructed with concrete, with the remainder constructed of a mat material covered with asphalt and a sealant. One of the former concrete ponds is currently in use as rainwater tank 3. Based on observations made during the RFI, the floor of tank 3 extends approximately one to two feet below grade. It was assumed that the other ponds were constructed similarly.

Numerous soil borings were advanced in the area during the initial and Phase II RFI investigations. In addition, profile boring SB-8 was advanced to a depth of 40.5 feet bgs in the northeastern portion of the area.

Shallow Soils

Shallow borings WMU46-A through WMU46-B, WMU46-SB3, WMU46-HB1 and WMU46-HB2 were advanced in the former copper cement pond area. Shallow soil samples were also collected from deeper soil borings SB-8, WMU46-SB1, and WMU46-SB2. Cadmium, total chromium, copper, nickel, lead, and zinc were found at concentrations in excess of their prediction limits at the majority of the sampled locations. Copper, nickel, lead, and zinc were detected at elevated concentrations (i.e., exceeding 1,000 mg/kg) in many shallow soil samples collected from the area. For example, maximum concentrations of 23,100 mg/kg copper, 11,800 mg/kg nickel, 18,300 mg/kg lead, and 14,600 mg/kg zinc were reported in the WMU46-A through E borings. Hexavalent chromium was not detected at the majority of the sampled locations, and where it was detected, concentrations were below the prediction limit.

Deep Soils

Soil boring locations WMU46-SB2 and SB-8 were both advanced to 40 feet bgs. At location WMU46-SB2, a total chromium concentration of 48 mg/kg at a depth of 35 feet bgs, and a copper concentration of 45 mg/kg at a depth of 40 feet bgs, slightly exceeded their prediction limits. Hexavalent chromium, nickel, lead, and zinc concentrations did not exceed their prediction limits. At location SB-8, copper and nickel exceeded their prediction limits in three of the four samples. Copper and nickel concentrations in the samples collected from the maximum depth of the boring (40.5 feet bgs) were 66.9 and 35.4 mg/kg, respectively.

Ferric Chloride Area

In order to stabilize the soils in the ferric chloride area (WMU18/19) prior to proposed redevelopment, shallow soils were reportedly mixed with lime to increase the pH of the soils. Analytical results for shallow soil samples collected for metals analysis from borings SB-4 through SB-6, FeCl-SB4, DHS-HB1, and WMU18/19 are illustrated on Plate 6.

Shallow Soils
Cadmium was detected at the majority of the sampled locations in excess of the prediction limit. A maximum concentration of 3.6 mg/kg cadmium was detected in the sample collected from the interval from ground surface to 1.5 feet bgs at location DHS-HB1. Total chromium, copper, nickel, lead, and zinc concentrations exceeded their respective prediction limits, with maximum concentrations (828 mg/kg total chromium, 9,660 mg/kg copper, 1,070 mg/kg nickel, 1,000 mg/kg lead, and 869 mg/kg zinc) detected at the WMU18/19 location.

Hexavalent chromium was not detected at the majority of the sampled locations and, where it was detected, it was below the prediction limit. Arsenic was also not detected in three samples collected from boring FeCl-SB4 to a depth of 11.5 feet bgs, however, it was detected in all three samples collected from boring WMU18/19. The concentration in the sample collected from 3 to 4 feet bgs slightly exceeded the average concentration for on-site. pH values were variable, with a low of 3.2 at location WMU18/19 and a high of 11.41 at location SB-4, at depths between 5 and 6 feet bgs.

Deep Soils
Soil borings SB-4 through SB-6 were advanced to depths ranging from 45 to 49 feet bgs. Total chromium and copper concentrations were generally above their prediction limits at all three locations. Cadmium was detected in all deep soil samples collected from borings SB-4 and SB-6. Concentrations ranged from 0.12 to 0.37 mg/kg at location SB-6, and from 0.06 to 0.25 mg/kg at location SB-4. pH values were low at all three locations through the sampled intervals, ranging from 3.14 at a depth of 21 feet in boring SB-6 to 5.34 at a depth of 16 feet bgs in boring SB-4.

Hexavalent chromium was not detected above its prediction limit in any of the deep soil samples. Arsenic was not detected in three samples collected from boring FeCl-SB4 at depths of 1, 5 and 11.5 feet bgs.

Former Zinc Pond Area
The Current Conditions Report indicated that an unpaved area in the northern portion of the Site was used for zinc storage, with a bermed area containing three storage tanks or ponds (see Figure 6, Appendix E). Neutralization sludges were also reportedly deposited in a depression in the area. In 1976, 720 cubic yards of material were removed from this area and disposed at a Class 1 landfill.

One boring, SB-1, was advanced to a depth of 40 feet bgs in the former zinc pond area. Cadmium and hexavalent chromium were not detected in any of the soil samples from boring SB-1. Concentrations did not exceed the prediction limits for the remaining metals (total chromium, copper, nickel, lead, and zinc). pH values ranged from 7.2 to 8.4. High concentrations of several metals were detected in shallow soil samples (to 10 feet bgs) collected from boring SB-2 located in the western portion of the area. Zinc storage reportedly took place in this area. The metal detected at the highest concentration was zinc, at a concentration of 30,800 mg/kg in the sample collected from a depth of 1 feet bgs. Concentrations were also elevated in samples collected to 10 feet bgs, and declined by orders of magnitude in samples collected in the interval from 15 to 40.5 feet bgs.

Spent Container Storage Area
Soil samples were collected from two shallow soil boring locations (WMU20-A/HB2 and WMU20-B/HB1) in the SCSA at a depth of 1 to 2 feet bgs. Cadmium, total chromium, copper, nickel, and lead were detected at both locations above their respective prediction limits. Maximum concentrations of 4.7 mg/kg cadmium, 1,190 mg/kg total chromium, 770 mg/kg copper, 113 mg/kg lead, and 316 mg/kg zinc were detected in boring WMU20-A/HB2.

Miscellaneous Areas
Railroad and Drainage Ditches
Shallow soil samples (1 to 2 feet bgs) were collected from six locations along the drainage ditch (DD-1 through DD-6) and six locations along the railroad tracks (RR-1 through RR-6). Cadmium, total chromium, copper, nickel, and lead concentrations exceeded their respective prediction limits at the majority of the sampled locations. The prediction limit for zinc was exceeded at only two of the six drainage ditch locations (DD-5 and DD-6) and one of the six railroad locations (RR-2). pH values ranged from 4.5 to 8.7 at the 12 sampled locations.

West Parking Lot
Locations sampled in the west parking lot area (WPL-HB1 and WPL-HB2) during the Phase II RFI are illustrated on Figure 4-1 in Appendix E. Analytical results are summarized in Table 4-2 of Appendix E. Cadmium was detected above the prediction limit at both locations at depths of 1 to 2 and 5 to 6 feet bgs. Total chromium, copper, and lead concentrations also slightly exceeded their prediction limits at boring location WPL-HB2 at depths of 1 to 2 and 5 to 6 feet bgs. Metals prediction limits were not exceeded in samples collected from depths of 9 to 10 feet bgs from all three sampled locations. Hexavalent chromium was also not detected at either location.

East Parking Lot
Four locations in the east parking lot (PL-HB1 through PL-HB4) were sampled to depths of approximately 6 feet bgs during the RFI. With minor exception, metals were not detected above their prediction limits at the four sampled locations. At location PL-HB4, copper exceeded its prediction limit in all three samples, at concentrations ranging from 75 to 109 mg/kg. Nickel and lead were also detected above their prediction limits at that location, with a maximum concentration of 102 mg/kg nickel and 48.5 mg/kg lead reported at that location. Total chromium slightly exceeded its prediction limit in one sample collected from PL-HB3. Hexavalent chromium was not detected in any of the 12 samples collected from the four locations.

Relocation Sites
Six relocation site borings were advanced to characterize soils beneath locations where wastewater tanks W-1 and W-2 might be moved, if necessary, to facilitate any

necessary remediation of Pond 1. Eight samples were collected for metals and pH analysis from relocation site boring RS-6, at depths ranging from 1 to 40 feet bgs. Prediction limits for cadmium, total chromium, copper, and lead were exceeded only in the shallow samples collected at depths of 1 and 3 feet bgs. Maximum concentrations were 2.0, 279, 1050, and 1590 mg/kg, respectively. The prediction limit for nickel was exceeded only in the sample collected from 1 feet bgs, where a maximum concentration of 536 mg/kg was detected. Prediction limits were not exceeded in samples collected at depths of 5.5, 10, 15, 20, 30, and 40 feet bgs. A low concentration of 2.8 mg/kg arsenic was detected in the sample collected at a depth of 20 feet bgs. As discussed below in Section 3.2.2, the sample collected from boring RS-6 at a depth of 3 feet bgs also contained the highest concentration of TCE detected in Site soils.

Soil samples to 40 feet bgs were also collected from five additional relocation site borings (RS-1 through RS-5). Cadmium, total chromium, copper, nickel, and lead were detected at concentrations above their respective prediction limits at all five locations. The concentrations generally exceeded the prediction limits in samples collected from 1 to 5 feet bgs, with samples collected below 5 feet bgs generally not exceeding prediction limits. The primary exception was cadmium, which was detected at depth at two locations (3.1, 1.0, and 0.60 mg/kg at depths of 15, 20, and 30 feet bgs in boring RS-2, and 8.6 mg/kg at a depth of 15 feet bgs in boring RS-3).

Hexavalent chromium was detected at a concentration of 138 mg/kg at a depth of 3 feet bgs in boring RS-4, and was generally not detected or detected at low concentrations at the remainder of the sampled locations. Low pH was observed at depths of 1, 3, 10, and 30 feet bgs at location RS-2 (pH 3.0, 3.5, 4.6, and 5.8, respectively).

Former Drum Storage Area No. 2

One shallow soil sample was collected from former drum storage area no. 2 (WMU22) in the interval from 1 to 2 feet bgs. Cadmium, total chromium, copper, nickel, and lead were detected above their prediction limits at concentrations of 1.5, 502, 498, 35.6, and 180 mg/kg, respectively. The pH of the sample was 4.6.

3.2.2 Chlorinated VOCs

Chlorinated VOC results for shallow and deep soil samples are illustrated on Plates 2 and 3, respectively.

Pond 1 Area

Relatively low concentrations of chlorinated VOCs were detected in boring PI-1 in samples collected from depths of 3 to 36.5 feet bgs. TCE, 1,1-DCA, MC, and acetone were detected at the location of PI-1 at concentrations ranging from 6 ug/kg (TCE) to 60 ug/kg (acetone). Only one compound (2-butanone, a.k.a. MEK) was detected at a concentration of 13 ug/kg at boring location PI-4. No other chlorinated VOCs were detected at these two sampled locations.

Former Chromic Acid UST
The largest number of individual chlorinated VOCs (TCE, PCE, 1,1-DCE, 1,1,1-TCA, chloroform, etc.) was detected at the three boring locations advanced in the area of the former chromic acid UST. The highest concentrations in the area were reported for samples collected from boring SB-7, located immediately adjacent to the former UST. Elevated concentrations of TCE (4,300 ug/kg), PCE (1,200 ug/kg), and 1,1,1-TCA (2,900 ug/kg) were detected at a depth of 20 feet bgs in the boring. Chlorinated VOCs were also detected at depths of 3.5, 5, 10, 15, 30, and 40 feet bgs in the boring. Concentrations detected in borings WMU12-SB1 and WMU12-SB2 were generally lower than the concentrations detected in SB7.

Former Fuel UST
Two soil samples for chlorinated VOC analysis were also collected from boring UST-SB7 in the former fuel UST area. MC was the only chlorinated VOC detected in the samples collected from depths of 15 feet bgs (1,100 ug/kg) and 35 feet bgs (290 ug/kg) in the boring. Samples for chlorinated VOC analysis were also collected from borings UST-SB14, UST-SB15, and UST-SB18 located outside the former fuel UST area. Two to three samples were collected from each boring in the approximate interval from 10 to 35 feet bgs. With the exception of a low concentration (150 ug/kg) of 1,2-DCA detected at a depth of 10 feet bgs at location UST-SB14, chlorinated VOCs were not detected at these locations.

Former Copper Cement Pond Area
Samples for chlorinated VOC analysis were collected from four boring locations (WMU46-SB2, WMU46-SB3, WMU46-E, and SB-8) within the former copper cement pond area. With minor exception, chlorinated VOCs were not detected at the four sampled locations. Exceptions were MC at a concentration of 28 ug/kg at location WMU46-E, MC concentrations ranging from 26 to 55 ug/kg at location SB8, and acetone at a concentration of 22 ug/kg at SB-8.

Ferric Chloride Area
Samples for chlorinated VOC analysis were collected from four shallow soil borings in the ferric chloride area (SB-4, SB-5, FeCl-SB4, and WMU18/19). Low levels of TCE ranging from 9 to 125 ug/kg were detected at all four locations. Five additional chlorinated VOCs (PCE, 1,2-DCE, MC, acetone, and 2-butanone) were also detected at low concentrations at location FeCl-SB4. Low levels of TCE (9 ug/kg) and acetone (120 ug/kg) were detected at location WMU18/19.

Spent Container Storage Area
Elevated levels of PCE (10,000 ug/kg at a depth of 1 to 2 feet bgs) and TCE (2,600 ug/kg at a depth of 2.2 feet bgs) were detected at boring location WMU20-B/HB1. Two borings were advanced at that location, with boring WMU20-B advanced during the initial RFI and boring HB1 advanced during the Phase II RFI. Boring HB1 was advanced in order to evaluate the vertical extent of PCE detected in the initial sample. Concentrations were observed to decline to low levels (206 ug/kg

PCE) in the final sample collected at a depth of 5 to 6 feet bgs. Chlorinated VOCs were also detected in all six soil gas sampling locations within the SCSA.

Miscellaneous Areas
Chlorinated VOCs were detected at elevated concentrations in one area not discussed above. The soil sample collected from boring location RS-6 at a depth of three feet bgs contained the highest concentration of chlorinated VOCs detected in site soils. A concentration of 110,000 ug/kg TCE was detected at this location, with no other VOCs detected. Foundry sand (yellow orange sand and vesicular glass) and a white material (possibly lime) were noted on the boring log in the upper four feet of the boring. A hydrocarbon odor was also noted at approximately five feet bgs. The sample was collected from the depth corresponding to the highest PID reading (140 ppm) noted during field screening with a PID. Below a depth of five feet bgs, PID readings declined to the low 20s ppm and less. Based on this ancillary information, it may be inferred that the vertical extent of contamination is limited. Considering the foundry sands observed in the shallow soils and the inferred attenuation with depth, location RS-6 is not believed to be an area of concern with respect to chlorinated VOC contamination.

3.2.3 Aromatic VOCs and TEPH

BTEX compounds were analyzed using Method 8020 for all soil samples collected during the RFI for purgeable aromatic analysis. Aromatic VOC and TEPH results for shallow and deep soil borings are illustrated on Plates 4 and 5, respectively. Within the context of this discussion, it is important to note that Sanborn Maps dated 1924 and 1925 (see Appendix B) indicate that the northeastern corner of the Site was occupied by Associated Oil Company. A crude oil tank farm consisting of a large 80,000 barrel tank and two 2,000 barrel tanks was noted on the Sanborn maps. An aerial photograph dated 1928 (see Appendix B) shows dark staining possibly associated with crude oil and other petroleum hydrocarbon releases from the tank farm in this general area.

Pond 1 Area
The aromatic VOCs toluene, ethylbenzene and total xylenes were detected at a depth of 2 feet bgs in boring PI-1 at maximum concentrations of 1,300, 60, and 410 ug/kg, respectively. The toluene concentration declined to 48 ug/kg in the sample collected at a depth of three feet bgs, with no other aromatics detected in the sample. Aromatic VOCs were not detected in the sample collected from a depth of 21.5 feet bgs in boring PI-4.

Former Chromic Acid UST
Toluene was detected in boring SB-7 at concentrations ranging from 86 ug/kg (10 feet bgs) to 29 ug/kg (15 feet bgs). Ethylbenzene and total xylenes were detected in the sample collected from a depth of 20 feet bgs at concentrations of 250 and 760 ug/kg, respectively. A concentration of 2,300 mg/kg TEPH was detected at a depth of 20 feet bgs at this location. Soil samples collected during the RFI for TEPH analysis were analyzed by Method 8015M, which did not include carbon chain speciation.

Former Fuel UST

During the RFI, a total of 11 soil borings (UST-SB1 through UST-SB11) were advanced in the immediate area of the former fuel UST to maximum depths of approximately 30 to 40 feet bgs. Four hand-auger boring locations (UST-HB1 through UST-HB5) were also advanced within the tank excavation to depths ranging from 16.5 to 18 feet bgs. During the Phase II investigation, seven additional borings (UST- SB12 through UST-SB18) were advanced in the vicinity of the former fuel UST to depths ranging from 25 to 35 feet bgs.

Elevated levels of benzene, toluene, ethylbenzene, and total xylene (BTEX) were generally detected in the borings placed within and immediately adjacent to the former UST. In general, BTEX concentrations in the Phase II borings were detected less frequently and at comparably lower concentrations than the initial UST borings.

Shallow Soils

Elevated BTEX concentrations were detected at several UST boring locations. Concentrations of 2,100 ug/kg benzene, 4,000 ug/kg ethylbenzene, and 8,000 ug/kg total xylenes were detected at depths of 10 to 10.5 feet bgs at location UST-SB2. Concentrations of 5,000 ug/kg ethylbenzene and 14,000 total xylenes were detected at a depth of 10 feet bgs at location UST-SB1. At location UST-SB4, BTEX concentrations were 2,000, 3,000, 11,000, and 27,000 ug/kg, respectively, at a depth of 10 feet bgs. Comparable BTEX concentrations were also detected at several other UST boring locations. TEPH was generally detected at concentrations ranging from the low to high 1000s ug/kg.

Deep Soils

Elevated BTEX and TEPH were detected at the four hand-auger boring locations collected within the excavation, immediately below the location of the former fuel USTs. Maximum concentrations of 5,000 ug/kg benzene (UST-HB5), 6,000 ug/kg toluene (UST-HB2), 37,000 ug/kg ethylbenzene, 310,000 total xylenes (UST-HB2), and 16,000 mg/kg TEPH (UST-HB1) were detected at these boring locations at depths ranging from 16.5 to 18 feet bgs. BTEX and TEPH concentrations were observed to generally decline with increased depth, and were generally not detected or detected at relatively low concentrations in the deepest samples collected at depths ranging from approximately 30 to 40 feet bgs. One notable exception was the detection of an elevated concentration of benzene (1,700 ug/kg) at a depth of 37 feet bgs in boring UST-SB3. Toluene, ethylbenzene, total xylenes, and TEPH were not detected in this sample.

Former Copper Cement Pond Area

Shallow Soils

Benzene was not detected in any of the shallow soil samples collected from the former copper cement pond area. Maximum detected concentrations for the other aromatic organics were 400 ug/kg toluene at SB-8 (5.5 feet bgs), and 5,100 ug/kg ethylbenzene and 14,000 ug/kg total xylenes at WMU46-SB3 (10 feet bgs). In addition, a maximum concentration of 8,500 mg/kg TEPH was detected at WMU46-A.

Deep Soils

With one minor exception (5 ug/kg at a depth of 20 feet bgs in boring WMU46-SB2), benzene was also not detected in deep soils collected from the former copper cement pond area. BTEX and TEPH concentrations were observed to generally decline with increased depth, and were generally not detected or detected at relatively low concentrations in the deepest samples collected at depths ranging from approximately 30 to 40 feet bgs.

Ferric Chloride Area

Benzene was detected at a concentration of 700 ug/kg at a depth of 15.5 feet bgs in boring SB-5 located in the ferric chloride area. Benzene was not detected in samples collected at depths of 5.5, 10.5, 35.5 and 45.5 feet bgs in the boring. A maximum concentration of toluene (380 ug/kg) was detected in boring SB-6 at a depth of 6 feet bgs. Ethylbenzene and total xylenes maximum concentrations were 70 ug/kg in boring SB-5 and 220 ug/kg in boring FeCl-SB4, with both samples collected at depths of 5.5 feet bgs.

Miscellaneous Areas

Railroad and Drainage Ditch Areas

Shallow soil samples were collected from locations DD-2 and RR-5 at depths of two feet bgs. Benzene, toluene, ethylbenzene, and total xylenes were not detected in the two samples. TEPH was detected at location DD-2 at a concentration of 5,400 mg/kg.

Relocation Site

Aromatic VOCs and TEPH were detected at elevated concentrations in two areas not discussed above. Elevated concentrations of 9,000 ug/kg ethylbenzene, 43,000 ug/kg total xylenes, and 460 mg/kg TEPH were detected at a depth of 3 feet bgs at the location of boring RS-6, a short distance west of the former chromic acid UST. TEPH was not detected in the sample collected from 20 feet bgs (aromatic VOCs were not analyzed). This was the highest reported detection for total xylenes of all locations sampled at the Site for aromatic VOC analysis. This was also the location where the highest chlorinated compound concentrations were detected.

3.2.4 PCBs

Shallow soil samples for PCB analysis were collected from several areas during the initial and Phase II RFI investigations. PCB sampling results from the initial investigation are summarized in Table 4-5, results from the Phase II investigation are summarized in Table 4-6. Both tables are provided in Appendix E.

Pond 1 Area
One PCB, aroclor 1260, was detected at a concentration of 1,100 ug/kg at a depth of 2 feet bgs in boring PI-1.

Former Chromic Acid UST
Aroclor 1260 was detected at a concentration of 1,700 ug/kg in boring SB-7 at a depth of 3.5 feet bgs.

Former Copper Cement Pond Area
PCBs were not detected in a sample collected from boring SB-8 at a depth of 5.5 feet bgs.

Ferric Chloride Area
Soil samples collected from six borings in the ferric chloride area contained the highest concentrations of PCBs of all soil samples collected at the Site. Aroclor 1260 concentrations ranged from 60 to 80,000 ug/kg, and were observed to generally decline with increased depth. Aroclor 1254 was detected in only one sample (FeCl-SB7 at a depth of 11 feet bgs) at a concentration of 100 ug/kg.

Miscellaneous Areas
Drainage Ditch Area
Aroclor 1260 was detected at two drainage ditch locations, DD-1 at a concentration of 880 ug/kg and DD-6 at a concentration of 200 ug/kg. The samples were collected from approximately 1 to 2 feet bgs.

West Parking Lot
Aroclor 1260 was detected in both parking lot borings (WPL-HB1 and WPL-HB2) and at all sampled depths. Concentrations ranged from 1,100 to 13,000 ug/kg. The concentrations were observed to decline with depth.

East Parking Lot
Aroclor 1260 was detected at a concentration of 3,000 ug/kg at a depth of 1 foot in boring PL-HB1. The concentration declined to 17 ug/kg in the sample collected from a depth of 5 to 6 feet bgs in the boring.

3.2.5 Semi-Volatile Organics

Samples for semi-volatile organics analysis were collected from a limited number of boring locations. Analytical results are summarized in Table 4-6, Appendix E. 2-methylnapthalene was detected at a concentration of 26,000 ug/kg at a depth of 5.5 feet bgs in boring SB-8 located in the former copper cement pond area.

1,2,4-trichlorobenzene was detected at a concentration of 1,200 ug/kg at a depth of 5.5 feet bgs in boring FeCl-SB4. Pyrene was detected at a concentration of 1,300 ug/kg in the interval from 1 to 2 feet bgs in boring WMU18/19, which was also located in the FeCl area. Di-n-butyl phthalate and bis (2-Ethyl-hexyl phthalate were detected at concentrations of 400 and 410 ug/kg, respectively, at boring locations DD-5 and DD-6.

3.3 Groundwater

Based on monitoring data acquired since 1985, there are basically three groundwater contaminant plumes underlying the PTI site. The plumes consist of hexavalent chromium, aromatic organics, and chlorinated solvents. The following discussion describes the occurrence and distribution of groundwater contaminants based on April 2003 quarterly sampling results. During preparation of this SCM, all historical groundwater quality data were input into the project's database. Tables summarizing VOCs, metals, and pH results from 1989 to the present are provided in Appendix F as Tables B-1 and B-2. Beginning in July 2001, analytical results have been provided electronically by the laboratory and input directly into the project's Access database. Historical data prior to July 2001 were input manually using historical analytical reports. Where analytical results are not indicated in Tables B-1 and B-2, either the analytical reports were not available for review and inputting or the compound was not analyzed. The historical analytical results were input into the database in order to generate the time series plots provided in Appendix F.

3.3.1 Metals

Routine quarterly groundwater monitoring at the PTI facility has generally included analysis for cadmium, hexavalent chromium, total chromium, and copper.

Hexavalent and Total Chromium
During the April 2003 sampling event, hexavalent and total chromium were detected in seven of the 14 sampled wells. Well MW-4 contained the highest detected concentration of hexavalent and total chromium (14 and 16 mg/l, respectively). Hexavalent chromium concentrations ranged from 0.0021 mg/l (MW-6D) to 0.25 mg/l (MW-9) in the remaining sampled wells. Concentrations of total chromium ranged from 0.0051 mg/l in well MW16 to 0.27 mg/l in well MW-9. Historically, the highest hexavalent and total chromium concentrations have been detected in well MW-4. The primary source of the chromium is likely the former chromic acid UST, which is located upgradient from the locations (MW-4 and MW-9) where elevated concentrations have historically been detected.

Hexavalent and total chromium concentrations and groundwater elevations in well MW-4 during the period from January 1989 to April 2003 are illustrated on the time series plots in Appendix F. Concentrations of hexavalent chromium generally decreased from July 1989 (120 mg/l) to July 1993 (1.8 mg/l), while groundwater elevations increased. Since July 1993, hexavalent chromium concentrations have fluctuated while groundwater elevations have remained fairly constant.

Approximately 17 years of quarterly monitoring at the facility has indicated that the hexavalent and total chromium plumes are not migrating off-site.

Cadmium and Copper
During the April 2003 sampling event, cadmium was detected in only one well (MW-4) at a concentration of 0.29 ug/l. Cadmium has consistently been detected only in well MW-4. The time series plots also illustrate the concentrations of cadmium detected in well MW-4 and groundwater elevations during the period from January 1989 to April 2003. Cadmium concentrations have fluctuated considerably (i.e., from non-detect at a detection limit of 0.005 mg/l during July 1993 to 0.86 mg/l during July 1992.

Copper was detected at a concentration greater than the reporting limit in three wells during the April 2003 sampling event. Concentrations ranged from 0.029 mg/l in well MW-14S to 0.035 mg/l in well MW-4A. None of these concentrations exceed the secondary MCL of 1.3 mg/l. Historically, with the exception of well MW-14S during one sampling event (October 1990), copper has not been detected in site wells at concentrations in excess of the secondary MCL.

3.3.2 Chlorinated Solvents

Chlorinated solvents detected most frequently and at elevated concentrations include TCE, 1,1-DCE, 1,1-DCA, and 1,1,1-TCA. TCE was detected in all 14 of the groundwater monitoring wells currently sampled during April 2003. The highest concentration of TCE (410 ug/l) was detected in well MW-11, along the northern boundary of the site. The TCE at locations MW-11 and MW-3 likely originated from off-site upgradient source(s). TCE was also detected at elevated concentrations at locations MW-9 (240 ug/l), MW-4 (130 ug/l) and MW-14S (160 ug/l). These three wells are located immediately downgradient of the former chromic acid UST, where elevated levels of chlorinated VOCs have been detected in subsurface soils.

Groundwater samples from selected wells (MW-1S, MW-4, MW-4A, MW-6D, MW-9, MW-11 and MW-15D) were analyzed for 1,4-dioxane during July and October 2001. The highest concentrations (130 and 140 μg/L) were detected in upgradient shallow well MW-1S during July and October 2001, respectively. The next highest concentrations were detected in MW-4 (16 and 37 ug/l) and MW-9 (18 and 75 ug/l) during July and October 2001, respectively. The concentrations of 1,4-dioxane in MW-11, located adjacent to the northern boundary of the Site, were 5.1 and 12 ug/l during July and October 2001, respectively. Concentrations in the three deep wells were less than 1 ug/l during both sampling events. A summary of 1,4-dioxane results are provided in Appendix F.

3.3.3 BTEX

During the April 2003 sampling event, aromatic organics were detected in three wells (MW-4, MW-14S, and MW-16). Benzene, ethylbenzene, and total xylenes were detected at concentrations of 5.6, 540, and 31 ug/l, respectively, in well MW-4. Benzene, ethylbenzene, and total xylenes were also detected in well MW-14S at concentrations of 2.6, 240, and 15.4 ug/l, respectively. One aromatic organic, ethylbenzene at a concentration of 8.3 ug/l, was detected at location MW-16. BTEX was not detected in deep site wells during the April 2003 sampling event.

A BTEX plume originating from off-site upgradient sources (e.g., Pilot Chemical) has frequently been observed in wells located along the northern boundary of the site during historical sampling events. The plume typically migrates towards the southwest and generally impacts wells located in the western portion of the site. The one exception is well MW-16, which was installed during the RFI specifically to monitor the area immediately downgradient of the former fuel USTs. Aromatic VOCs detected at this location likely originate from the former fuel UST area.

3.3.4 Appendix IX Parameters

In December 2002, four wells (MW-4, MW-7, MW-11, and MW-14S) were sampled for Appendix IX parameters (organochlorine and organophosphorus pesticides, chlorinated herbicides, polychlorinated biphenyls [PCBs], VOCs, semi-VOCs, Title 22 metals, hexavalent chromium, total cyanide, sulfide, dioxins and furans). With the exception of the parameters discussed above in Sections 3.3.1 through 3.3.4 which are part of the routine groundwater monitoring program, the remainder of the Appendix IX parameters were either not detected or were detected at relatively low concentrations (see Tables G-2 and G-3 in Appendix F) and are not believed to be COCs for the Site.

3.3.5 Correlation between Water Levels and Water Quality

Time series plots indicate that the higher water levels generally resulted in lower concentrations of dissolved TCE, cadmium, and chromium between approximately 1991 and 1999. These decreases indicate that rises in water levels generally had a dilutionary affect on the dissolved constituents, as opposed to increasing dissolution of contaminants from impacted soils in the area. Contaminant concentrations in many of the wells have risen to pre-1991 levels in response to normalization of groundwater elevations.

Similarly, the time series plots of metals concentrations generally indicate that higher concentrations occur during seasonally lower water levels around January of each year. Relatively lower concentrations occur in summer months while groundwater levels are higher. This trend suggests that metals concentrations are concentrated as groundwater levels drop, and diluted as levels rise.

Water level measurements at the location of well MW-6A during the past 17 years of quarterly monitoring indicates that the Gage aquifer at that location has not been saturated.

3.4 Surface Water

Arrows depicting the direction of storm water flow during rainfall events are provided on Plate 1. The locations of storm water retention features (e.g., containment berms, collection wall, etc.) are also illustrated on Plate 1. All storm water falling within the boundaries of the site is collected and processed in the facility's wastewater treatment system.

Four surface water samples were collected in 1991 during a storm event (CDM, 1991). Three of these samples were collected from a drainage site adjacent to the Site, including one upstream, one downstream, and one near the center of the site along the drainage. Results for hexavalent chromium, total chromium, iron, and lead were all below detection limits. The downstream location had a cadmium concentration of 0.0057 mg/L. Nickel was detected at the middle and downstream locations at concentrations of 0.3 mg/L and 0.41 mg/L. Copper and zinc were detected at all locations with concentrations between 0.034 and 0.81 mg/L and 0.22 to 0.72 mg/L respectively. Laboratory measurements of pH ranged between 6.8 and 8 (CDM, 1991). Analytical results are summarized in Table 4-2, Appendix E.

A surface water sample was collected in December 2001 from an on-site stormwater sump. This sample was analyzed for pH, total suspended solids, total cyanide, oil and grease, and other constituents. Results indicated that pH was 7.60, and nominal concentrations of cyanide, ammonia, aluminum, iron, chromium, copper, and nickel were detected in the sample. The analytical report is provided in Appendix G.

3.5 Areas of Concern and Potential Constituents of Concern

Organic compounds are present in soil gas, and organic and inorganic constituents are present in soils and groundwater underlying the Site. Based on field investigation results and groundwater monitoring performed to date, several AOCs have been identified at the Site. The locations of these AOCs are illustrated on Plate 1. A tabular summary of AOCs and potential COCs is provided in Table 3-1.

Chlorinated VOCs are not naturally occurring compounds and are listed as potential COCs on the table where detected. Owing to the former fuel UST at the facility, all detections of BTEX and TEPH will also be considered potential COCs where detected.

Metals (cadmium, hexavalent chromium, total chromium, copper, nickel, lead and zinc) detected in site soils above their prediction limits are also listed on the table. It should be noted that the prediction limit of 60.5 mg/kg for hexavalent chromium was calculated based on off-site sampling results that included detections at location BG-2. There are certain limited conditions under which hexavalent chromium may occur naturally. Because there is no information to suggest that the hexavalent chromium detected at a depth of 30 feet bgs in background boring BG-2 was not naturally occurring, the BG-2 results were included in the prediction limit. At the time of sampling, the location appeared to have been used for agricultural purposes. In addition, historical aerial photos revealed that structures have never been build on the property, and the land has either been vacant or used for agriculture prior to the collection of the background soil samples. Because arsenic was not sampled at background boring locations and a prediction limit could not be calculated, the average value calculated during the RFI (excluding non-detects) will be used to determine whether arsenic is a potential COC for the various AOCs.

T 3-1
Areas of Concern and Pot...al Constituents of Concern

AOC	Media	Chlorinated VOCs	BTEX and TEPH	Metals	Semi-Volatile Organics	PCBs
ıd 1 Area	Soil	MC, acetone, 2-butanone, TCE, 1,1-DCA	TEX	**Cd, Cr+6, Cr, Cu, Ni, Pb, Zn, As**		arochlor 1260
'mer Chromic Acid UST	Soil	**TCE, PCE, 1,1-DCA, 1,2-DCE, 1,1,1-TCA, CFM, MC, acetone**	TEX,TEPH	**Cd, Cr+6, Cr, Cu, Ni, Pb, Zn, As**		arochlor 1260
'mer Fuel UST Area	Soil	MC, 1,2-DCA	**BTEX, TEPH**	As		
'mer Copper Cement Pond 'a	Soil	MC, acetone	TEX, TEPH	**Cd, Cr, Cu, Ni, Pb, Zn**	2-methyl napthalene	
ric Chloride Area	Soil	TCE, PCE, 1,2-DCE, MC, Acetone, 2-butanone, 2,4-TCB	BTEX	**Cd, Cr, Cu, Ni, Pb, Zn, As**		arochlor 1260
mer Zinc Pond Area	Soil			**Cd, Cr, Cu, Ni, Pb, Zn, As**		
ınt Container Storage Area	Soil	**TCE, PCE**		Cd, Cr, Cu, Ni, Pb		
cellaneous Areas						
?ailroad and Drainage Ditches	Soil		TEPH	**Cd, Cr+6, Cr, Cu, Ni, Pb, Zn**		arochlor 1260
Nest Parking Lot	Soil			Cd, Cr, Cu, Pb		arochlor 1260
ᴇast Parking Lot	Soil			Cr, Cu, Ni, Pb		arochlor 1260
?elocation Sites	Soil	**TCE**	**EX**	Cd, Cr+6, Cr, Cu, Ni, Pb, Zn		arochlor 1260
·ormer Drum Storage Area No. 2	Soil			Cd, Cr, Cu, Ni, Pb		
Quadrant of the Site	Soil Vapor	**VC, CA, DCM, trans-1,2-DCE, 1,1-DCA, cis-1,2-DCE, CFM, 1,1,1-TCA, TCE, PCE, Freon 11, Freon 113**	**BTEX**			
-Wide	Groundwater	**PCE, TCE, 1,1-DCE, 1,2-DCA, cis-1,2-DCE, CCl4, MC, CFM**	**BTEX**	**Cd, Cr+6, Cr**	1,4-dioxane	

- tetrachloroethene
- trichloroethene
methylene chloride
:opper
hromium
vinyl chloride
- chloroform
; - polychlorinated biphenyls

1,1- and 1,2-DCE - 1,1- and 1,2-dichloroethene
2,4-TCB - 2,4-trichlorobenzene
BTEX - benzene, toluene, ethylbenzene, xylenes
TEPH - total extractable petroleum hydrocarbons
Cd - cadmium
CA - chloroethane
1,1- and 1,2-DCA - 1,1- and 1,2-dichloroethane
CVOCs - chlorinated volatile organic compounds

As - arsenic
Cr+6 - hexavalent chromium
Ni - nickel
Pb - lead
Zn - zinc
DCM - dichloromethane
CCl4 - carbon tetrachloride
1,1,1-TCA - 1,1,1-trichloroethane

if an individual COC listed above is shown in Bold, then it has been determined in Section 4 to be a COC for the area and media indicated.

Section 4
Contaminant Sources and Fate and Transport

This section is organized according to the AOCs listed in Table 3-1. Within each AOC, each type of potential COC (volatile organics, metals, TEPH, etc.) for each affected media (soil gas, soil, and groundwater) is discussed. Soil gas is discussed for those AOCs where soil gas samples were collected. Groundwater is discussed from a site-wide perspective in Section 4.9.

4.1 Pond 1

Volatile organic compounds (both chlorinated and aromatic organics) and metals were detected in subsurface soils underlying Pond 1. In order to evaluate whether Pond 1 was a source for the constituents observed in soils underlying the unit, the following additional information is provided regarding the operation of Pond 1.

As discussed previously, Pond 1 was constructed in 1975 by adding 6-inches of reinforced concrete over Pond 8 and extending the walls. Pond 8 was a former wastewater treatment pond in use prior to 1972 or 1974, and was not a regulated unit. According to Kleinfelder's 1986 Environmental Assessment Report, the contents of Pond 1 varied only slightly during its 10 years of operation, and were generally maintained between pH 6 and 13. In 1985, use of the pond for direct treatment was discontinued and the pond was drained and cleaned. No visible signs of cracks, leakage, or chemical degradation were observed. The report also noted that the high pH of the pond precipitated gypsum upon the pond walls and bottom, further reinforcing the pond's seal. The pond is currently used as secondary containment for wastewater treatment tanks W-1 and W-2.

4.1.1 VOCs

Chlorinated VOCs

As described in Section 3 and shown on Plates 2 and 3, low levels (i.e., less than 100 ug/kg total chlorinated VOCs) of several chlorinated VOCs were detected in shallow and deep soils underlying the Pond 1 area. As illustrated on Plates 2 and 3, the maximum concentrations (26 ug/kg methylene chloride and 60 ug/kg acetone) were observed in the shallowest sample collected from a depth of three feet bgs. Concentrations in samples collected at depths of 7, 27, and 36.5 feet bgs were lower (i.e., maximum 14 ug/kg MC in the sample collected from a depth of 36.5 feet bgs) and were generally comparable to each other. Chlorinated VOCs were not detected in the soil gas sample collected from a depth of five feet bgs in soil gas boring SV-19 located adjacent to the southeast corner of Pond 1; however, concentrations up to 240 ug/l 1,1-DCA and 280 ug/l freon 113 were detected in the sample collected from 18 feet bgs.

Considering that only four individual chlorinated VOCs were detected at low concentrations in soils underlying Pond 1 and the 10-year period that Pond 1 was in operation, it is unlikely that Pond 1 was the source of the chlorinated VOCs underlying Pond 1. Concentrations would be expected to be much higher and detected with greater frequency if Pond 1 were the source. No information is available for Pond 8; however, it is possible that Pond 8 (which did not include the additional six-inch thickness of reinforced concrete and extended walls) was the source of the observed low levels of contamination. An additional source of the low levels of chlorinated VOCs detected in the samples collected from depths of 27 and 36.5 feet bgs may also have been lateral migration from the former chromic acid UST area, which is a known source for VOCs, as discussed in Section 4.2 below. The soil gas detections at 18 feet bgs may also be attributable to lateral migration from the former chromic acid tank area, or adsorption of vapors that have "off-gassed" from groundwater.

Aromatic VOCs
As shown on Plates 4 and 5, aromatic VOC concentrations followed the same trend described above. The primary difference consisted of elevated levels of toluene (1,300 ug/kg) and xylenes (410 ug/kg) detected in the initial sample collected from boring PI-1 at a depth of two feet bgs (this sample was not analyzed for chlorinated VOCs, so no comparison can be made with chlorinated VOC concentrations). A low level of ethylbenzene (60 ug/kg) was also detected in the sample.

Concentrations declined significantly in the sample collected from a depth of three feet bgs (48 ug/kg toluene, and xylenes were not detected), and were comparable to the observed chlorinated VOC concentrations. The large decline in concentration indicates that the source was relatively minor. Deeper soil samples underlying Pond 1 were not submitted for aromatic VOC analysis; however, aromatic VOCs were not detected in the sample collected at a depth of 21.5 feet bgs from boring PI-4, located approximately 15 feet north of Pond 1.

For the reasons discussed above regarding chlorinated VOCs, Pond 1 is not believed to be a source of aromatic VOCs to the subsurface environment. There are a variety of historical activities that may have resulted in the aromatic VOC and TEPH contamination observed at the Site. As shown on Plate 1, foundry sands are extensive in shallow soils in the northern portion of the facility, north of the east-west road. In addition, large-scale historical bulk oil storage operations were ongoing in the immediate vicinity of the Site for a minimal 25 year period (from approximately the early 1920s to the late 1940s).

4.1.2 Metals

All seven metals COCs (arsenic, cadmium, chromium, hexavalent chromium, copper, nickel, lead, and zinc) were observed at elevated concentrations above their respective prediction limits in both shallow and deep soils underlying Pond 1 see Plates 6 and 7). Several sources are possible for the observed contamination; in particular Pond 1 or its predecessor, considering its use for primary wastewater treatment during an approximate 10-year period. As discussed above, the observed contamination may have resulted from operation of the prior wastewater treatment pond (Pond 8). In addition, Pond 1 is located within the portion of the facility where foundry sands were observed in shallow soils at a large number of the soil boring locations (see Plate 1). It is not possible to distinguish whether the observed shallow metals contamination resulted from leaks from the wastewater treatment pond, or were derived from the foundry sands. The high pH observed in shallow soils underlying the pond indicates that wastewater treatment may have contributed to the observed contamination.

The 1986 Environmental Assessment evaluated chromium and pH values in soils underlying Pond 1 and concluded that Pond 1 was not the source. This determination was based on chromium concentrations which generally increased with depth, and pH values which also generally decreased with increased depth. The report concluded that lateral migration from the former chromic acid UST through the permeable soils of the unsaturated Gage aquifer (at approximate depths of 15 to 30 feet bgs) was the likely source. The pH of the former chromic acid UST was in the range of 1 to 3, whereas the pH of Pond 1 was maintained between 6 and 12. Samples with low pH values, therefore, may be traced back to the former chromic acid UST and not Pond 1.

The same decreasing pH trend was generally observed in many of the subsurface soil samples collected during the RFI investigation, lending support to the concept for lateral migration from the former chromic acid UST area. With regard to metals concentrations, however, there is no clear correlation between concentrations and depth. In general, shallow soils underlying Pond 1 have higher metals concentrations than deeper soils. In several instances, elevated metals concentrations were observed in the unsaturated Gage aquifer soils that also correlated to low pH. The lack of an observed trend would appear to indicate multiple sources may exist for the metals contamination observed below Pond 1. Foundry sands containing elevated metals were observed in shallow samples collected from many locations north of the east-west road. Given the location of Pond 1 north of the road, it is reasonable to assume that foundry sands were also present in this area.

In summary, metals contamination beneath Pond 1 is attributable to several possible sources: foundry sands, lateral migration from the former chromic acid UST area, and former Pond 8. While Pond 1 cannot be ruled out as a possible source, for the reasons stated above Pond 8 is believed to be a more likely source than Pond 1.

4.2 Former Chromic Acid UST

VOCs and metals were detected in soils underlying the former chromic acid UST.

4.2.1 VOCs

Chlorinated VOCs

As previously discussed, an extensive subsurface soil investigation was performed in the area of the former chromic acid UST during the mid 1980s. RFI profile boring SB-7 was located immediately adjacent to the former UST. Seven samples for VOC analysis were collected from the boring at depths ranging from 3.5 to 40 feet bgs. Samples collected from the boring, therefore, provide a good indication of the vertical distribution of chlorinated VOCs in subsurface soils underlying the former chromic acid UST.

Seven individual chlorinated VOCs were detected in the soil samples collected from boring SB-7. The highest concentrations were detected in samples collected from depths of 3.5 feet bgs (silt) and 20 feet bgs (sand). Comparatively lower concentrations were detected in the samples collected from depths of 30 and 40 feet bgs. The lithologic materials in these deeper samples consisted of a combination of sandy silt, silty sand, and silty clay.

Based on number of individual detected chlorinated VOCs and elevated levels observed in the subsurface at location SB-7, the former chromic acid UST is considered to be a potential source of chlorinated VOC contamination. The subsurface lithology (sand in the approximate interval from 20 to 31 feet bgs with a minimum 10-feet thick underlying silty clay) at the location also favors the lateral transport of contaminants.

Aromatic VOCs

A limited number of samples from boring SB-7 were submitted for aromatic VOC analysis (10, 15 and 20 feet bgs). Samples were not collected for aromatic VOC analysis at depths shallower than 10 feet bgs. Comparable to chlorinated VOCs, the highest concentration was detected in the sample collected from a depth of 20 feet bgs. The aromatic VOC contamination appears to correlate to chlorinated VOCS, and indicates that the former chromic acid UST may also have been a source of aromatic VOC contamination.

4.2.2 Metals

High metals concentrations were detected in all samples collected from boring SB-7 located adjacent to the former chromic acid UST. In addition, low pH values were reported for all samples with the exception of the shallowest (3 feet bgs) and the deepest samples (40.5 feet bgs). These findings indicate that the former UST was a probable source of the observed metals contamination. As previously discussed, contamination originating from the former UST likely migrated laterally to the Pond 1 area.

4.3 Former Fuel UST

4.3.1 VOCs

Chlorinated VOCs

Several UST boring locations in areas surrounding the former fuel UST were sampled for chlorinated VOCs. With one exception, chlorinated VOCs were either detected at relatively low concentrations (e.g., 150 ug/kg 1,2-DCA at a depth of 10 feet bgs in boring UST-SB14) or were not detected. The exception was boring UST-SB7, which was a slant boring to the northwest. MC was detected in the boring at concentrations of 1,100 and 290 ug/kg at depths of 15 and 35 feet bgs, respectively. MC was detected in the majority of the samples collected from boring SB-7 which was located northwest of the former fuel UST and adjacent to the former chromic acid UST. There is no information to suggest that chlorinated organics were stored in the fuel USTs. The former fuel USTs, therefore, are not believed to be a source of chlorinated VOC contamination.

Aromatic VOCs and TEPH

Elevated levels of aromatic VOCS (all four BTEX constituents) and TEPH were detected in the former fuel UST area. The highest concentrations were generally observed in both shallow soils and in the permeable sediments of the unsaturated Gage aquifer. Relatively low concentrations or non-detects were generally observed in the deepest samples collected from the aquitard underlying the Gage aquifer. The former fuel UST is believed to be the primary source for the observed contamination. As was observed in the former chromic acid UST area, the contamination appears to have migrated laterally through the Gage.

Metals

Analysis for metals was not performed on any of the samples collected from the UST soil borings, with the exception of slant boring UST-SB7. Three samples were collected for chromium and arsenic analysis, and the arsenic concentration in the deepest sample collected from 40.5 feet bgs slightly exceeded the on-site average concentration. Because of the depth of the sample, arsenic is not believed to be a COC in the former fuel UST area. There is also no information to indicate that the former fuel UST area was a source of metals contamination.

4.4 Former Copper Cement Pond Area

4.4.1 VOCs and Semi-VOCs

Chlorinated VOCs

Five borings in the former copper cement pond area were analyzed for chlorinated organics. At all sampled locations, chlorinated organics were either not detected or were detected at relatively low concentrations (i.e., less than 100 ug/kg). Methylene chloride and acetone, which are common laboratory contaminants, were the only chlorinated VOCs detected. The former copper cement pond area, therefore, is not believed to be a source of chlorinated VOC contamination.

Aromatic VOCs and TEPH
Aromatic VOCs (with the exception of benzene) and TEPH were generally detected at elevated concentrations throughout the former copper cement pond area. Based on the elevated concentrations and number of detections, the area is believed to be a source of aromatic VOC and TEPH contamination. Based on the vertical distribution of contaminants which shows a general concentration increase in the permeable sediments of the unsaturated Gage aquifer, it appears that the former fuel USTs also contributed to the observed contamination in this area. Concentrations generally declined in samples collected from the underlying aquitard.

An unknown third source (possibly from the nearby historical oil fields or above ground bulk oil storage tanks) is also indicated based on review of the boring log for WMU46-SB2. At this location, silty clay was observed in three samples collected to a depth of 10 feet bgs. A black, tarry, oily sand saturated with product was observed just below the silty clay at an approximate depth of 11 feet bgs. The depth of saturation is higher than expected if the former fuel UST were the source. In addition, saturation was not observed in borings located closer to the former fuel UST, lending support to the possibility of an unknown third source.

The semi-VOC 2-methylnaphthalene was detected at a concentration of 26,000 ug/kg at a depth of 5.5 feet bgs in boring SB-8. No other semi-VOCs were detected in the sample, and the source of this contamination is unknown.

4.4.2 Metals

Metals (with the exception of hexavalent chromium, which was detected below the prediction limit and arsenic which was not analyzed) were detected at elevated concentrations throughout the former copper cement pond area. The area, therefore, is believed to be a source of metals contamination. Concentrations detected in shallow soils to depths of approximately 5 and 6 feet bgs were generally much higher than concentrations detected in deeper samples. The ponds were relatively shallow and did not extend more than a foot or two below grade. Based on evaluation of the results and vertical distribution and the at-grade to slightly below grade construction of the ponds, the contamination appears to be primarily limited to the finer-grained shallow sediments of the Bellflower aquitard.

4.5 Ferric Chloride Area

4.5.1 VOCs

Chlorinated VOCs
Several shallow soil borings in the ferric chloride area were analyzed for chlorinated VOCs. TCE was detected at all sampled locations, with relatively low levels (maximum 110 ug/kg TCE at 5.5 feet bgs) of six individual chlorinated VOCS detected at the location of boring FeCl-SB4. With the exception of a low concentration of MC (8 ug/kg), chlorinated VOCs were not detected in the final sample collected at a depth of 11 feet bgs at that location. As discussed previously, shallow soils in the area were mixed with lime years ago in preparation for proposed redevelopment. As

indicated on the boring logs, lime was observed at most of the boring locations advanced in the ferric chloride area. Shallow soils throughout the area have been disturbed and it is possible that soils were imported from other areas. Based on the low concentrations detected in the shallow soils and absence of any activities which may have used chlorinated solvents in this area, the area does not appear to be a source of chlorinated VOC contamination.

Aromatic VOCs
Aromatic VOCs were detected at slightly higher concentrations than the chlorinated VOCs discussed above. Based on the distribution and concentrations of the contaminants, the area does not appear to be a source of aromatic VOC contamination.

4.5.2 Metals

Elevated metals (with the exception of hexavalent chromium which was not detected above its prediction limit) were detected at the majority of the locations sampled within the ferric chloride area. Concentrations were generally more elevated in shallow soils, however, elevated concentrations were also observed in deep samples. Based on the lateral and vertical distribution of the various metals, and low pH values observed to the maximum sampled depth, the area is believed to be a potential source area for the observed metals contamination.

4.5.3 PCBs

PCBs were analyzed at five soil boring locations in the ferric chloride area. One PCB (aroclor 1260) was consistently detected at all locations at elevated concentrations. Concentrations generally were most elevated in shallow samples collected at depths of 1 to 5 feet bgs, and declined rapidly with depth. Based on the lateral extent and elevated concentrations, the ferric chloride area is a probable source area for the observed PCB contamination. The detected PCBs are likely associated with historical activities in the area, and are not believed to be associated with current or historical chemical facility activities. As indicated on the 1924 and 1925 Sanborn Maps, the ferric chloride area bordered the former Pacific Electric Railway Company right-of-way, and a Pacific Electric Railway Company substation was located to the west of the ferric chloride area.

4.6 Former Zinc Pond Area

High concentrations of metals (arsenic, cadmium, chromium, copper, nickel, lead, and zinc) were detected in shallow soils to depths of 10 feet bgs at the location of boring SB-2. The highest reported metal concentration was zinc, which was detected at 30,800 mg/kg in the sample collected at a depth of 1 foot bgs. Concentrations were observed to decline orders of magnitude in samples collected from 15 to 40.5 feet bgs. Based on the high surficial concentrations, notably zinc, the former zinc pond area is a probable source for the observed metals contamination. The higher concentrations are generally limited to the shallow relatively fine-grained soils of the Bellflower aquitard, and do not appear to have migrated to the underlying coarser-grained unsaturated Gage aquifer.

4.7 Spent Container Storage Area (SCSA)

4.7.1 VOCs

Elevated levels of PCE (10,000 ug/kg at a depth of 1 to 2 feet bgs) and TCE (2,600 ug/kg at a depth of 2.2 feet bgs) were detected at one of the two shallow boring locations within the SCSA (WMU20-B/HB1). Concentrations were observed to decline to low levels (206 ug/kg PCE and TCE was not detected) in the final sample collected at a depth of 5 to 6 feet bgs. Chlorinated VOCs were detected in all six soil gas sampling locations within the SCSA. Based on the use of the area for storage of spent containers and detections of chlorinated VOCs in both soil and soil gas samples collected within the area, the SCSA is believed to be a possible source area for chlorinated VOCs. Additional investigation west and south of this area has been recommended as part of a proposed Phase II soil gas investigation.

4.7.2 Metals

Elevated metals (cadmium, chromium, copper, nickel and lead) were detected in two shallow soil samples collected from the SCSA. Given the location of the SCSA in the northern portion of the Site where foundry sands were generally detected, the elevated metals be attributable to the foundry sands. Lithologic logs were not prepared for the two shallow borings; therefore, the presence of foundry sands at those locations could not be confirmed. Based on the limited data, it is not possible to determine whether the area is a possible source for the observed metals contamination.

4.8 Miscellaneous Areas

4.8.1 Railroad and Drainage Ditches

TEPH

An elevated concentration of TEPH (5,400 mg/kg) was detected in the interval from 1 to 2 feet bgs at the location of shallow boring DD-2 (northern drainage ditch). There are insufficient data to determine whether the drainage ditch is a source of the detected TEPH contamination. Given the nature of the drainage ditch and track areas, it is possible that the shallow observed contamination originated from an off-site source(s).

Metals

Elevated metals concentrations were detected in shallow soil samples collected from 12 locations in the north and south drainage ditches, and from the railroad track area. As discussed in Section 5 of the Current Conditions Report, numerous discharges were noted along the railroad tracks south of rainwater tank 3. The drainage ditch and railroad track areas, therefore, are likely sources of the observed contamination.

PCBs
One PCB (aroclor 1260) was detected at low concentrations (maximum 880 ug/kg) in shallow soils at two drainage ditch locations (DD-1 and DD-6). As previously discussed, historical activities in the area are a possible source for the observed contamination.

4.8.2 West Parking Lot

Metals
Four metals (cadmium, chromium, copper, and lead) were detected at concentrations slightly in excess of their prediction limits in shallow samples (1 to 2 and 5 to 6 feet bgs) from two sampled locations in the west parking lot area. Based on the relatively low concentrations and lack of exceedences in samples collected in the interval from 9 to 10 feet bgs, the area is not believed to be a source for metals contamination.

PCBs
One PCB (aroclor 1260) was detected at elevated concentrations at both locations and all sampled depths, however, concentrations also declined rapidly with depth. As previously discussed, the detected PCBs are likely associated with historical activities in the area, and are not believed to be associated with current or historical chemical facility activities.

4.8.3 East Parking Lot

Metals
Four metals (chromium, copper, nickel and lead) were detected at slightly elevated concentrations in samples collected from the east parking lot. Copper, at a maximum concentration of 170 mg/kg, was detected at the highest concentration in a sample collected from 0.5 to 1 feet bgs at location PL-HB1. Copper declined to below its prediction limit in the two subsequent samples (3 to 4, and 5 to 6 feet bgs) collected at that location. Based on the relatively low concentrations, the east parking lot is not believed to be a source of metals contamination.

PCBs
One PCB (aroclor 1260) was detected at an elevated concentration (3,000 ug/kg) at a depth of 0.5 to 1 feet bgs at the location of shallow boring PL-HB1. The concentration declined to 17 ug/kg in the sample collected from 5 to 6 feet bgs. As discussed previously, detected PCBs are likely associated with historical activities in the area, and are not believed to be associated with current or historical chemical facility activities.

4.8.4 Relocation Site

VOCs
As previously discussed, the soil sample collected from boring RS-6 at a depth of three feet bgs contained the highest concentration of chlorinated VOCs detected in site soils. A concentration of 110,000 ug/kg TCE was detected at this location, with no other chlorinated VOCs detected. Elevated concentrations of 9,000 ug/kg

ethylbenzene and 43,000 ug/kg total xylenes were also detected in the sample. This was the highest reported detection for total xylenes of all locations sampled at the Site for aromatic VOC analysis.

Foundry sand (yellow orange sand and vesicular glass) and a white material possibly lime, were noted on the boring log in the upper four feet of the boring. The boring was located just north of the wastewater treatment area and a short distance west of the former chromic acid UST area. Foundry sands at that location indicate that historical pre-chemical company activities may be a possible source for the observed contamination. Due to the elevated levels, however, the location is considered to be a possible source area for VOC contamination.

Metals
As previously discussed, prediction limits were exceeded primarily in the shallow samples collected. Foundry sands were also observed in shallow soils at five of the six boring locations. Deeper samples generally did not exceed prediction limits, therefore, the relocation sites are not believed to be a source area for metals.

4.8.5 Former Drum Storage Area No. 2

There is insufficient information to determine whether former drum storage area no. 2 (WMU-22) is a source area for metals.

4.9 Groundwater

Areas believed to be soil contamination source areas are discussed below to evaluate whether the impacted areas are likely (or possibly) contributing to observed groundwater contamination, or have the potential to negatively impact groundwater in the future.

4.9.1 VOCs

As discussed previously in Section 1.7, numerous off-site sources of VOC contamination exist in the area. Toluene, ethylbenzene, and xylene contamination was observed in both soil and groundwater at the Pilot facility located approximately 0.1 miles north of PTI. Chlorinated compounds in soil and groundwater have also been documented for the Techni Braze, Inc. facility located 0.2 miles north-northeast of the Site. Based on evaluation of the historical and recent water quality sampling results for wells MW-1S, MW-1D, and MW-11, it is apparent that an unknown, but likely significant, portion of the chlorinated and aromatic VOC contamination observed in groundwater underlying the Site has been derived from off-Site source areas.

As shown in bold on Table 3-1, the following AOCs are believed to be source areas for VOCs in Site soils: the former chromic acid UST, the former fuel UST, the SCSA, and relocation site RS-6. Of these four locations, the former chromic acid UST and the former fuel UST are believed to be source areas for groundwater VOC contamination due to the depth of observed VOC contamination. VOC contamination observed at relocation site RS-6 and the SCSA appears to be relatively shallow, therefore, these two areas are not believed to be source areas, nor are they likely to be source areas in the future.

4.9.2 Metals

As shown in bold on Table 3-1, seven AOCs are believed to be source areas for metals in Site soils. As also indicated on the table, the three metals COCs for groundwater underlying the Site are hexavalent chromium, total chromium, and cadmium. The remaining four metals (i.e., copper, nickel, lead, and zinc) detected in Site soils have generally been detected at low concentrations in groundwater underlying the Site, and are not believed to be groundwater COCs.

The former chromic acid UST is believed to be a source for groundwater metals COCs due to the depth of the observed contamination. In addition, the Pond 1 area (Pond 1 or its predecessor Pond 8) is also believed to be a possible source area for metals COCs in groundwater. As previously discussed, time series plots of cadmium, total chromium, and hexavalent chromium provided in Appendix F illustrate changing concentrations through time at the majority of the sampled well locations. Elevated levels of cadmium, total chromium, and hexavalent chromium at well MW-4 located downgradient from both the former chromic acid UST and Pond 1 area indicate that these locations are sources of groundwater contamination.

It is not known whether the other AOCs believed to be source areas for metals contamination in Site soils (i.e., former copper cement pond area, ferric chloride area, former zinc pond area, railroad and drainage ditch areas, and the relocation sites) are source areas for the observed groundwater contamination.

4.9.3 1,4-Dioxane

As previously discussed, the highest concentration of 1,4-dioxane was detected in the groundwater at the location of upgradient well MW-1. Based on limited information, the Site is not believed to be a source area for this compound.

4.10 Fate and Transport of COCs

Stormwater infiltration is one of the primary mechanisms to facilitate the transport of contaminants vertically and laterally. As discussed, the Site is currently fully paved (with the exception of the railroad spur) and all stormwater is collected and treated in the Site wastewater treatment system. Because the Site is paved and stormwater falling within Site boundaries is contained and treated, this driving mechanism is not believed to be a concern at the Site. Rock ballast and gravel at the surface along the railroad spur allow for lateral and vertical migration during storm events. The area is relatively small, Site runoff no longer flows into this area, and there have not been any releases to the area for many years, according to the facility manager. These factors likely minimize future negative impacts to the subsurface in that area.

Coarser-grained materials were observed in the Bellflower aquitard at the locations of the former chromic acid UST area, the former fuel UST, and the Pond 1 area (see

Plate 1). These three AOCs coincide with locations where elevated concentrations of COCs were observed in the unsaturated Gage aquifer. The coarser-grained shallow soils at these locations provide a mechanism for the vertical transport of contaminants from shallow to deeper soils. The boring logs adjacent to the former fuel UST indicate that native materials in the upper 10 feet consisted primarily of clays and silty clays. More permeable materials were likely placed under and around the USTs during installation. Leaks from the former fuel USTs likely traveled through the backfill and migrated laterally and vertically through the unsaturated Gage aquifer. Following removal of the USTs in 1989, the approximately 12 to 15 feet deep excavation was reportedly backfilled with clean fill dirt. As previously discussed, the area was paved following removal of the USTs.

The coarser-grained and more permeable sediments of the unsaturated Gage aquifer allow for transport of contaminants both vertically and laterally, particularly in the event that the unsaturated Gage aquifer becomes saturated. The Gage aquifer underlying the Site has been monitored for saturation since well MW-6A was installed in 1985. Since that time, saturation has not been observed at that location. Well MW-6A is located along the southern boundary of the Site, and is the only well that monitors the Gage aquifer. It is possible that the Gage aquifer could become saturated in other areas of the Site or areas upgradient of the Site, and there could be a delayed response at MW-6A due to its location at the Site's southern (and assumed downgradient) boundary. Additional Gage aquifer monitoring, therefore, has been proposed for the Site and will likely be implemented in the near future.

The aquitard underlying the unsaturated Gage aquifer is relatively thick (generally a minimum of 20 to 30 feet) and laterally continuous (see Figures 2-1 and 2-2) under the Site. The aquitard appears to thin in the southwestern portion of the Site, and also appears to be interbedded with coarser-grained materials in this area. Based on historical and recent detections of cadmium, hexavalent chromium, and total chromium in groundwater underlying the Site, it appears that these metals have migrated around or through the aquitard underlying the Gage aquifer and into the underlying Hollydale aquifer. Vertical migration to the underlying Jefferson aquifer, and lateral migration to off-site areas in the future; therefore, are both possible. Historical monitoring data indicate that the metals groundwater plume has not migrated off-site. Occurrences of these metals have generally stayed localized near the likely source areas.

Several wells are key to evaluating the transport of contaminants downgradient of the source areas. Shallow well MW-15S provides information on cadmium, hexavalent chromium, and total chromium migration at the downgradient boundary of the Site. Well MW-4A provides a monitoring point for the lower Hollydale aquifer adjacent to Pond 1, and well MW-15D monitors the merged lower Hollydale/Jefferson aquifer at the downgradient boundary of the Site. Well MW-16 monitors the upper Hollydale aquifer immediately downgradient of the former fuel UST area.

Hexavalent and total chromium concentrations in well MW-4A indicate that these COCs have either not been detected in the well, or have been detected at low concentrations. Due to use of a different analytical method, low levels of hexavalent chromium (ranging from 5.2 to 7.7 ug/l) have been detected in the well since April 2001. Cadmium has not been detected in the well since 1992. These data indicate that there is some degree of hydraulic separation between the upper and lower Hollydale aquifers, since concentrations in the upper Hollydale at that location (well MW-4) are many orders of magnitude higher (e.g., 290 ug/l cadmium, 16,000 ug/l total chromium, and 14,000 ug/l hexavalent chromium during the April 2003 sampling event) than the lower Hollydale.

Cadmium and total chromium concentrations at the location of well MW-15S have generally been non-detect throughout the 13 year monitoring period. Recent low level detections of hexavalent chromium (ranging from 3.5 to 10 ug/l) are also a function of the different analytical method and lower detection limits in use since April 2001. Recent low level detections of hexavalent chromium at MW-16 are also likely a function of the different analytical method and lower detection limits. Both total and hexavalent chromium concentrations at that location spiked in January 2002 (110 and 96 ug/l, respectively), however, the increase appears to be anomalous as concentrations prior to and after the spike were generally below or close to the detection limits. During the five most recent sampling events, hexavalent chromium concentrations in MW-16 ranged from non-detect (at detection limits of 1 and 2 ug/l) to a maximum of 5.1 ug/l.

Cadmium, hexavalent chromium, and total chromium concentrations in well MW-15D, which monitors the merged lower Hollydale/Jefferson aquifer, have also generally been non-detect during the 13 year monitoring period. Hexavalent chromium detections since July 2001 have also been a function of different analytical method and lower detection limits. Concentrations since July 2001 have ranged from non-detect (at detection limits of 1 and 2 ug/l) to 8.1 ug/l. During the most recent January and April 2003 sampling events, hexavalent chromium was not detected. The three metals COCs, therefore, do not appear to be migrating off-Site or vertically.

With respect to the migration of aromatic VOCs from the former fuel UST area, elevated concentrations were detected in 1993 and 1994 in well MW-16. Since 1994, an approximate nine year period, concentrations have generally been low to non-detect. The elevated detections in 1993 and 1994 appear to be related to high water levels which reached their peak in 1995. In the event that water levels rise and approach 1993 to 1995 levels, it is likely that aromatic VOCs will be mobilized from the unsaturated zone.

It should be noted that toluene, ethylbenzene, and xylene concentrations in well MW-9 also exhibited large peaks during the period from 1992 to 1995. For example, in July 1994, concentrations were 56,000, 15,000, and 40,000 ug/l, respectively, in well MW-9. By comparison, concentrations in MW-16 during July 1994 were non detect (at a detection limit of 50 ug/l) , 1,300, and 730 ug/l, respectively. The concentrations observed at MW-9 were also much higher than concentrations observed at well MW-11, which has typically been used to monitor VOCs migrating onto the Site from facilities directly north of PTI. Since October 2001, aromatic VOCs have generally been non-detect at location MW-9. The source of the 1992 to 1995 elevated concentrations is unknown. This location should be closely monitored in the event that future water levels approach the levels observed during 1992 to 1995.

Chlorinated VOC concentrations in wells MW-4 and MW-9 have remained elevated throughout the 13 year monitoring period in comparison to upgradient well MW-1S. Elevated concentrations have also been observed in well MW-11 throughout the monitoring period. Due to known chlorinated VOC contamination both regionally and from facilities directly north and upgradient of PTI, it is not possible to evaluate the migration of chlorinated VOCs associated with known or probable on-Site source areas.

and from facilities directly north and upgradient of PTI, it is not possible to evaluate the migration of chlorinated VOCs associated with known or probable on-Site source areas.

Section 5
Human Health Risk

A risk assessment was conducted in the early 1990s based on information available at that time (CDM, 1993). Additional risk assessment activities will be conducted in the future based upon methodology changes over time, subsequent availability of additional data, and a reevaluation of receptors and exposure pathways. The following components of human health risk assessment are discussed below:

- Section 5.1, Site Conceptual Exposure Model - This component of the risk assessment process characterizes potentially exposed populations at the site and identifies pathways through which people at the site may be exposed to contaminated media.

- Section 5.2, Chemicals of Potential Concern - The purpose of this component is to identify chemicals that are detected in Site media and that will be carried through the risk assessment process.

5.1 Site Conceptual Exposure Model

This section discusses potentially exposed populations and exposure pathways for the Site. Potentially exposed populations are discussed in Section 5.1.1. A site conceptual exposure model (SCEM) was developed based on available information. The SCEM, presented in Figure 5-1, provides the framework for assessing potential exposure pathways at the site. Exposure pathways are discussed in Section 5.1.2.

5.1.1 Potentially Exposed Populations

The city of Santa Fe Springs is approximately 73.5 percent industrial, 1.5 percent commercial, 10 percent residential, 2 percent parks and facilities, and 13 percent streets. The city is dedicated to maintaining a predominantly industrialized business base; therefore, future use of the PTI property is anticipated to remain industrial. It is unlikely that the property would be used for any other purposes other than industrial in the future.

The primary exposed population currently at the Site consists of industrial workers. As discussed above, future receptors are also expected to be industrial workers. In addition, people may walk along the railroad track on the southern boundary of the Site. These passers by are also potential current and future receptors, albeit with infrequent and limited exposure.

Groundwater at the Site is not used for beneficial purposes. However, residents may be exposed to Site contaminants in groundwater if groundwater beneath the Site migrates into the beneficially used Jefferson aquifer and subsequently downgradient to production well locations. Nine active production wells are located one to three miles downgradient of the Site; these wells are screened deeper than 193 feet bgs.

5.1.2 Exposure Pathways

An exposure pathway consists of the following elements:

- A chemical source and mechanism of release,
- An environmental transport medium for the released chemical,
- A point of potential human exposure with the contaminated medium (medium of concern), and
- A route of exposure (e.g., inhalation, ingestion, or dermal absorption).

An exposure pathway is considered to be complete when it has all four elements. Pathways identified as complete indicate that exposure is possible, but do not necessarily mean that exposure will occur or that exposure will occur at the levels estimated in this report. The absence of any one of these elements would result in an incomplete exposure pathway. Incomplete exposure pathways do not pose a health risk and are not typically evaluated in risk assessments.

Chemical Source and Release Mechanisms: Sources at the Site consist of historical industrial activities. These activities resulted in the release of chemicals into Site media. As a result of chemical release, the following media are of concern:

- Surface and subsurface soil
- Soil gas
- Groundwater

Environmental Transport: Non-volatile chemicals in soils are unlikely to undergo significant transport based upon current site conditions. Soils are generally covered with asphalt, concrete, or structures. Therefore, Site soils are not available to be entrained by wind or to be contacted directly under normal conditions and are not subject to water infiltration.

VOCs in soil and groundwater may be transported into soil gas through vapor migration. Soil gas may migrate through soil and be released to outdoor or indoor air as a consequence of barometric pumping and diffusion. Indoor vapor concentrations are typically greater than outdoor concentrations because vapors will be trapped and concentrated in the indoor environment compared to their dispersion and dilution in the outdoor environment. Chemicals in subsurface soil may migrate into groundwater. Currently, significant migration of subsurface soil contaminants is unlikely due to the presence of concrete, asphalt, and buildings across the majority of the Site.

Chemicals in groundwater beneath the Site may theoretically migrate into the deeper, beneficially used aquifer. Nine active production wells located one to three miles downgradient of the Site are screened deeper than 193 feet bgs. The active downgradient wells are not perforated in the Hollydale aquifer, though it is possible that some of the wells are perforated in the Jefferson aquifer. As discussed, in the southwestern portion of the Site, the Hollydale and Jefferson aquifers are likely merged.

Stormwater from adjacent industrial facilities and the railroad tracks flows through two ditches south of PTI.

Potential Points and Routes of Human Exposure: Based on the information presented above, media of concern at the Site consist of soils, soil gas, indoor air, and groundwater. Soils are covered by concrete, asphalt, and buildings, which limits exposure. One minor exception is the railroad area on the southern boundary of the Site. At this location, workers and passers by could potentially have direct exposure to soil. Although this area does not contain significant concentrations of contaminants in surface soils, this potential pathway was quantitatively evaluated for risk in the 1993 risk assessment.

Groundwater beneath the site is not currently used for beneficial purposes and is not planned to be used in the future. The most significant pathway for exposure to chemicals in groundwater is dependent upon the potential for chemicals to be transported off-site. There are no active production wells within one-mile downgradient of the Site, and active production wells located one to three miles downgradient of the Site are screened deeper than 193 feet bgs. The active downgradient wells are not perforated in the Hollydale aquifer, though it is possible that some of the wells are perforated in the Jefferson aquifer. As discussed, in the southwestern portion of the Site, the Hollydale and Jefferson aquifers are likely merged.

Surface water is not used as a drinking water source in the vicinity of PTI. Surface water was quantitatively evaluated for risk in the 1993 risk assessment and was not considered to be a significant pathway.

Within one mile of PTI, property use is mainly industrial. The closest residential area is about 1000 feet northwest from PTI. During the prior assessment, it was noted that seven elementary schools, two high schools, and one childcare center were present within one mile. Population within this area was approximately 26,000.

Current and future industrial workers at the Site may be exposed to chemicals in site media through the following exposure pathways:

- Incidental ingestion of soil during hand-to-mouth activity (only in railroad area on the southern boundary);
- Touching soil (i.e., dermal contact) (only in railroad area on the southern boundary);

- Inhalation of particulates in outdoor air that have been released from soil through wind erosion (non-volatile chemicals only, only in railroad area on the southern boundary);

- Inhalation of vapors in indoor air (VOCs only).

Current and future passers by in the railroad area on the southern boundary of the Site may be exposed to chemicals in site media through the following exposure pathways:

- Incidental ingestion of soil during hand-to-mouth activity;

- Touching soil (i.e., dermal contact);

- Inhalation of particulates in outdoor air that have been released from soil through wind erosion (non-volatile chemicals only);

Area residents may theoretically be exposed to chemicals in site media through the following exposure pathways:

- Ingestion of groundwater used for beneficial purposes (dependent upon migration of groundwater into deeper, beneficially used aquifer and subsequent migration one to three miles downgradient to production well locations);

- Inhalation of volatile chemicals in groundwater used for beneficial purposes (dependent upon migration of groundwater into deeper, beneficially used aquifer and subsequent migration one to three miles downgradient to production well locations).

5.2 Potential Constituents of Concern

Based on previous investigations and groundwater monitoring data acquired since 1985, chemicals present at PTI in Site soils include metals (arsenic, cadmium, hexavalent chromium, total chromium, copper, nickel, lead, and zinc), chlorinated and aromatic VOCs, semi-VOCs, and TEPH. PCBs have also been detected in shallow Site soils and are likely associated with prior use of the Site by Pacific Electric Railway Company.

Groundwater contaminants at PTI include aromatic and chlorinated VOCs, semi-VOCs, and metals (cadmium, hexavalent chromium, and total chromium). Consistent with USEPA and State of California risk assessment guidance, all detected chemicals are evaluated as potential COCs. Inorganic chemicals are evaluated to determine whether they are present at concentrations greater than background levels. For a complete listing of potential COCs, please refer to Table 3-1 in Section 3.

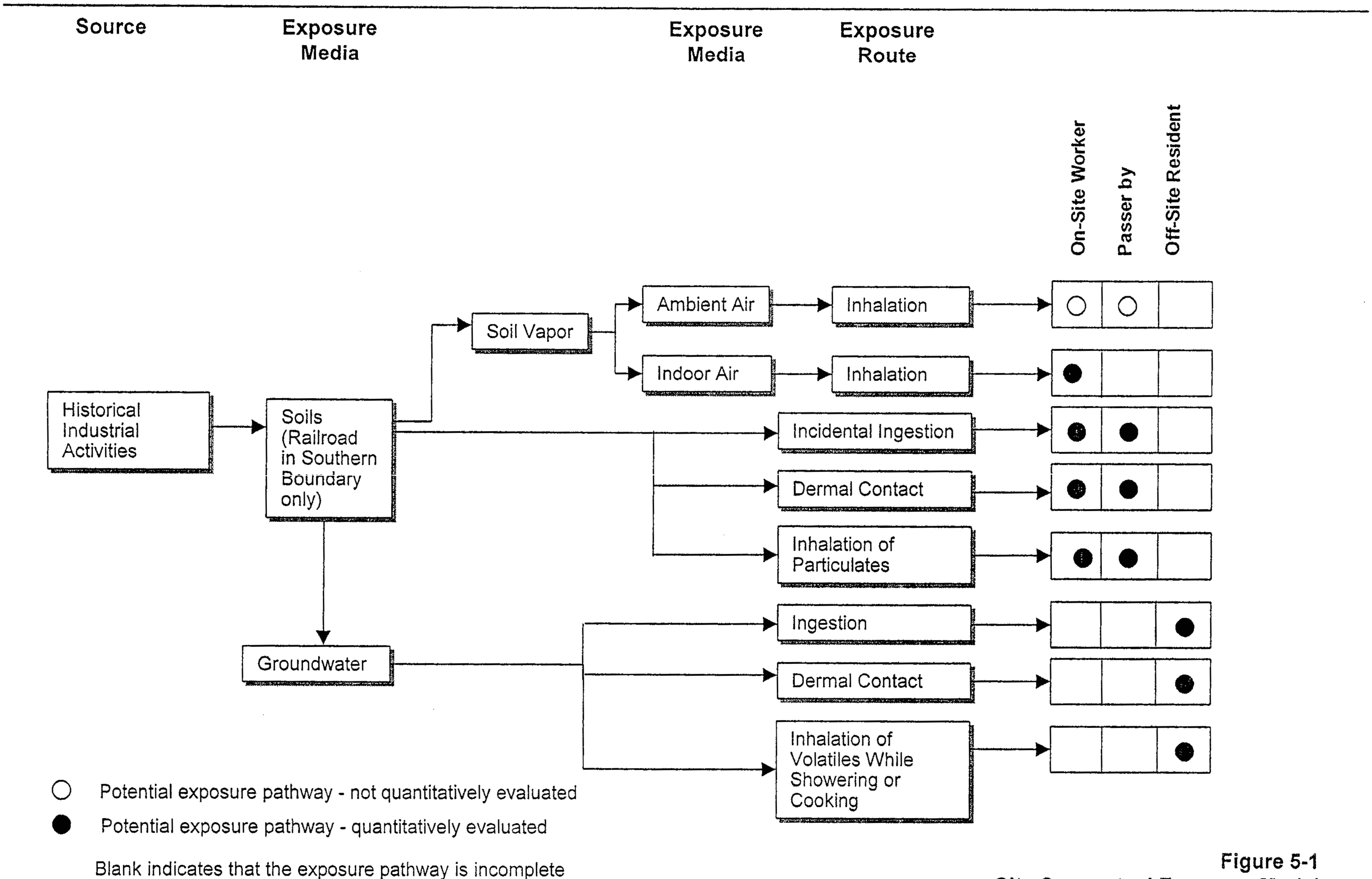

Figure 5-1
Site Conceptual Exposure Model
PTI

Section 6
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Appendix A
Closure Plan Figure and Tables

Table CP-1
FACILITY WASTE STREAM DESCRIPTION

PTI Waste Type Identifier	Waste Stream	EPA Waste Codes	California Waste Codes	Hazardous Properties	Physical State	Color	pH
A	**Copper Sulfate Crystal**	D002; D004, D006, D007, D008,	141, 171, 172, 181	Corrosive and Toxic	Solid w/some liquids	Blue	N/A
B	**Copper Sulfate Solution**	D002; D004, D006, D007, D008,	132, 135, 141, 791, 792	Corrosive and Toxic	Liquid	Blue	< 6
C	**Cupric Chloride Etchant**	D002; D004, D006, D007, D008,	132, 135, 141, 791, 792	Corrosive and Toxic	Liquid	Dark Green	< 6
D	**F006 Sludge Sludge with Nickel and/or Copper**	D002; F006, D004, D006, D007, D008,	132, 135, 162, 171, 172, 181, 421, 491	Corrosive and Toxic	Solid w/some liquids	Dark Green for Nickel to Dark Blue for Copper	> 6
E	**Nitric Acid Copper Rack Strip**	D002; D004, D006, D007, D008,	132, 135, 141, 726, 791, 792	Corrosive and Toxic	Liquid	Dark Blue	< 6
F	**Solder Tin Stripper**	D002; D004, D006, D007, D008,	132, 135, 141, 792	Corrosive and Toxic	Liquid	N/A	< 6
G	**Nickel Plating Solution or Nitric Acid Nickel Rack Strip**	D002; D004, D006, D007, D008,	132, 135, 141, 726, 791, 792	Corrosive and Toxic	Liquid	Dark Green	< 6
H	**Ferric Chloride Solution**	D002; D004, D006, D007, D008,	132, 135, 141, 791, 792	Corrosive and Toxic	Liquid	Brown	< 6
IA	**Miscellaneous Inorganic Acid**	D002; D004, D006, D007, D008,	123, 132, 135, 141, 791, 792	Corrosive or Corrosive and Toxic	Liquid	N/A	< 7
IB	**Miscellaneous Inorganic Base**	D002; D004, D006, D007, D008,	121, 122, 123, 132, 135, 141	Corrosive or Corrosive and Toxic	Liquid	N/A	> 7
J	**Spent Alkaline Copper Etchant**	D002; D004, D006, D007, D008,	121, 123, 141, 132, 135	Corrosive and Toxic	Liquid	Dark Blue	> 7
K	**Alk-Cu-Strip Copper Etchant**	D002; D004, D006, D007, D008,	121, 123, 141, 132, 135	Corrosive and Toxic	Liquid	Dark Blue	> 7

1. EPA Code D002 is primary waste code for all wastes; the additional waste codes may be attached to the waste stream by the generator for LDR or other purposes.
2. D002 - Corrosivity; D004 - Arsenic; D006 - Cadmium; D007 - Chromium; D008 - Lead; F006 - Wastewater treatment sludges from electroplating operations (see 22 CCR 66261.31(a) for electroplating operations that are exceptions to this waste code)

Clayton GROUP SERVICES

Table CP-3
WASTE MANAGEMENT UNITS AND MAXIMUM INVENTORY

Tank No.	Waste Stream(s)	Other Uses	Material of Constructio	Dimensions: Thickness (in.) (Note 2)	Diam. (ft.)	Height (ft.)	Maximum Volume (gal.)	Tank Features
C Area								
C-1A	C, J (Reactor)		FRP	.384/.309/.248	10	15	8,800	M, R-LI
C-1B	C, J (and CuOxide Product)		FRP		10	14	8,700	M, R-LI
C-1C	C, J (Reactor)		FRP		10	15	8,800	M, R-LI
C-1D	C, J (Reactor)		Titanium		9	23	10,900	M, R-LI
C-5	C		FRP	.492/.416/.370	10	16	9,300	UT-LI
C-6	C		FRP	.492/.416/.370	10	16	9,300	UT-LI
C-7	C		FRP	.492/.416/.370	10	16	9,300	UT-LI
C-8	J, K		FRP	.389/.288/.248	12	19	15,228	UT-LI
C-9	J, K		FRP	.389/.288/.249	12	19	15,228	UT-LI
S Area								
S-1A	B (Reactor)		FRP	.375 minimum	11	10.5	7,000	M, R-LI
S-1B	B (Reactor)		FRP	.368/.328	11	10.5	7,500	M, R-LI
S-3	B		FRP	0.5/0.375	11.5	15.083	12,690	UT-LI
S-5	B		FRP	.368/.288/.248	10	16	9,300	UT-LI
F Area								
F-1	H		FRP	.389/.309/.248	10	17.25	10,575	UT-LI
F-2A	H (Reactor)		FRP	0.3600	12	13.25	11,200	R-LI
J Area								
J-2	C (Reactor)		FRP	.368/.248	8	13	4,500	M, UT-LI
J-3	All except J, H		FRP	.246/.226	10	14	8,225	M, UT-LI
J-4	All except J, H		FRP	.246/.226	10	14	8,225	UT-LI
W Area								
W-1	Any Wastewater (Reactor) (Note 3)		FRP	~.375	18	15.5	30,457	M, UT-LI
W-2	Any Wastewater (Reactor) (Note 3)		FRP	.375 (min.)	18	15.5	30,457	M, UT-LI
				Total Tank Volume			235,685	
Container Storage								
ERS #1	Any Solid or Liquid Wastestream		Coated concrete				109,086	
ERS #2	Any Solid or Liquid Wastestream		Coated concrete					
Rail cars (4)	B, C, GNA, GNE, GR, GS, GSA, H, I, IA, IB, J						64,000	
				Total Container Volume			173,086	

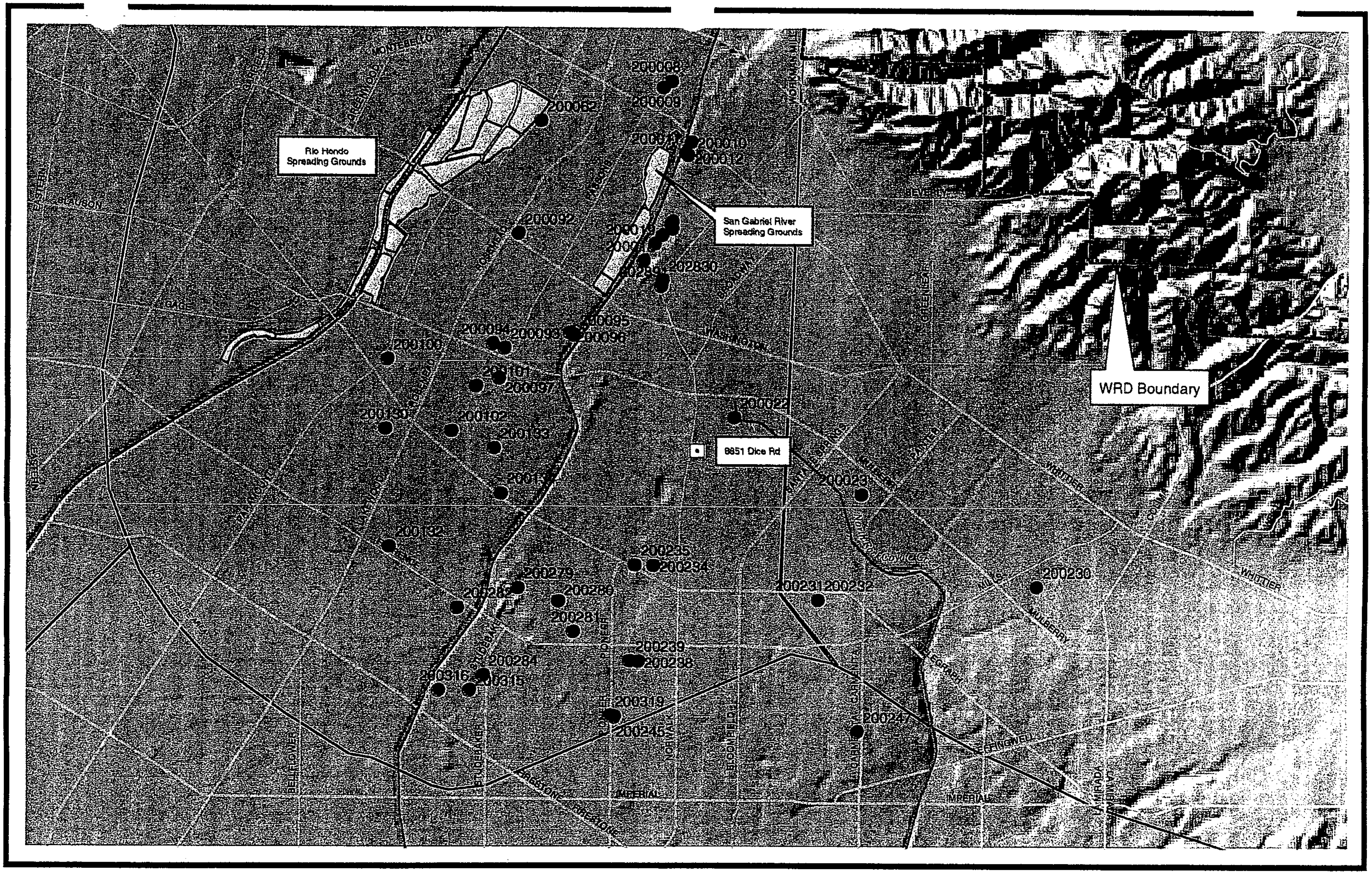
Legend:

FRP-- Fiber Reinforced Plastic
M -- Mixer
N/A-- Not Applicable
R-LI -- Radar Level Indicator
UT-LI -- Ultrasonic Level Indicator

Notes:

1. All tanks are designed for specific gravity of 1.45
2. Multiple thicknesses listed from bottom section to top section
3. Rain water plus any wastewater from wastes received onsite.

Appendix C
Production Well Survey Information



12621 East 166th Street
Cerritos, CA 90703
(562) 921 5521Phone
(562) 921 6101 Fax

N
W E
S

Wells located within a 3 mile radius of 8851 Dice Road, Santa Fe Springs, CA

WRD
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

WRD ID	State Well ID	DPW ID	OWNER	TYPE	STATUS	BASIN
200008	2S/11W-18B08S	2929P	Pico Water District	Production Wells	Active	CB
200009	2S/11W-18C03S	2929C	Pico Water District	Production Wells	Active	CB
200010	2S/11W-18K03S	1620E	Whittier, City of	Production Wells	Active	CB
200011	2S/11W-18Q01S	1620GG	San Gabriel Valley Water Company	Production Wells	Active	CB
200012	2S/11W-18Q07S	1620PP	San Gabriel Valley Water Company	Production Wells	Active	CB
200013	2S/11W-19F01S	1621NN	La Habra Heights County Water District	Production Wells	Active	CB
200015	2S/11W-19F03S	1621T	La Habra Heights County Water District	Production Wells	Active	CB
200016	2S/11W-19F07S		San Gabriel Valley Water Company	Production Wells	Active	CB
200017	2S/11W-19F08S		San Gabriel Valley Water Company	Production Wells	Active	CB
200018	2S/11W-19M01S	1621MM	La Habra Heights County Water District	Production Wells	Active	CB
200019	2S/11W-19M04S	1621S	La Habra Heights County Water District	Production Wells	Active	CB
200022	2S/11W-30R03S		Santa Fe Springs, City of	Production Wells	Active	CB
200023	2S/11W-32J04S	1654K	Whittier Union High School District	Production Wells	Active	CB
200062	2S/12W-13L05S	1600X	Pico Water District	Production Wells	Active	CB
200092	2S/12W-24E07S		Pico Water District	Production Wells	Active	CB
200093	2S/12W-25E10S	1603T	Pico Water District	Production Wells	Active	CB
200094	2S/12W-25E13S	1602T	Pico Rivera, City of	Production Wells	Active	CB
200095	2S/12W-25G01S	1612Q	Pico Rivera, City of	Production Wells	Active	CB
200096	2S/12W-25G02S	1612P	Pico Rivera, City of	Production Wells	Active	CB
200097	2S/12W-25M01S	1603W	Pico Rivera, City of	Production Wells	Active	CB
200100	2S/12W-26E03S	1583X	Pico Rivera, City of	Production Wells	Active	CB
200101	2S/12W-26J01S		El Rancho Unified School District	Production Wells	Active	CB
200102	2S/12W-26Q01S	1593S	Pico Rivera, City of	Production Wells	Active	CB
200130	2S/12W-35D04S		Downey, City of	Production Wells	Active	CB
200132	2S/12W-35P01S	1585A	Downey, City of	Production Wells	Active	CB
200133	2S/12W-36D01S	1604V	El Rancho Unified School District	Production Wells	Active	CB
200134	2S/12W-36M06S	1604AB	Pico Rivera, City of	Production Wells	Active	CB
200230	3S/11W-03C01S	1675E	Whittier Union High School District	Production Wells	Active	CB
200231	3S/11W-05G02S		Ashland Chemical Co.	Production Wells	Active	CB
200232	3S/11W-05G03S		Ashland Chemical Co.	Production Wells	Active	CB
200234	3S/11W-06C03S		Rocky Mountain Industries, Inc.	Production Wells	Active	CB
200235	3S/11W-06D03S		Santa Fe Springs, City of	Production Wells	Active	CB
200238	3S/11W-06N01S	1626X	Little Lake Cemetery District	Production Wells	Active	CB
200239	3S/11W-06N02S		Julian and Helen Hathaway	Production Wells	Active	CB
200244	3S/11W-07E01S	1617J	Southern California Water Company	Production Wells	Active	CB
200245	3S/11W-07E02S	1617N	Southern California Water Company	Production Wells	Active	CB
200247	3S/11W-08H01S	1657	Southern California Water Company	Production Wells	Active	CB
200279	3S/12W-01F08S	1605L	Santa Fe Springs, City of	Production Wells	Active	CB
200280	3S/12W-01G09S		Whittier Union High School District	Production Wells	Active	CB
200281	3S/12W-01K09S		Paradise Memorial Park	Production Wells	Active	CB
200282	3S/12W-02H04S	1596H	Downey, City of	Production Wells	Active	CB
200284	3S/12W-02R01S	1606U	Southern California Water Company	Production Wells	Active	CB
200315	3S/12W-11A06S		Southern California Edison Co.	Production Wells	Active	CB
200319	3S/12W-12A02S	1617K	Southern California Water Company	Production Wells	Active	CB
202830	2S/11W-19P02S		La Habra Heights County Water District	Production Wells	Active	CB
202891	2S/11W-19P03S		La Habra Heights County Water District	Production Wells	Active	CB

Note: Shading indicates well discussed in detail in Section 1.8

WRD ID	State Well ID	Month	Year	Production (Acre Feet)
200022	2S/11W-30R03S	1	2001	175.47
200022	2S/11W-30R03S	2	2001	122.93
200022	2S/11W-30R03S	3	2001	164.46
200022	2S/11W-30R03S	4	2001	162.70
200022	2S/11W-30R03S	5	2001	153.74
200022	2S/11W-30R03S	6	2001	170.76
200022	2S/11W-30R03S	7	2001	165.80
200022	2S/11W-30R03S	8	2001	163.36
200022	2S/11W-30R03S	9	2001	150.42
200022	2S/11W-30R03S	10	2001	153.08
200022	2S/11W-30R03S	11	2001	146.68
200022	2S/11W-30R03S	12	2001	155.20
200022	2S/11W-30R03S	1	2002	162.92
200022	2S/11W-30R03S	2	2002	148.83
200022	2S/11W-30R03S	3	2002	165.16
200022	2S/11W-30R03S	4	2002	157.90
200022	2S/11W-30R03S	5	2002	162.15
200022	2S/11W-30R03S	6	2002	161.24
200022	2S/11W-30R03S	7	2002	174.35
200022	2S/11W-30R03S	8	2002	174.93
200022	2S/11W-30R03S	9	2002	163.37
200022	2S/11W-30R03S	10	2002	154.24
200022	2S/11W-30R03S	11	2002	148.06
200022	2S/11W-30R03S	12	2002	156.06
200022	2S/11W-30R03S	1	2003	71.51
200022	2S/11W-30R03S	2	2003	121.36
200022	2S/11W-30R03S	3	2003	165.38
200022	2S/11W-30R03S	4	2003	163.51
200022	2S/11W-30R03S	5	2003	167.40
200132	2S/12W-35P01S	1	2001	2.93
200132	2S/12W-35P01S	2	2001	1.59
200132	2S/12W-35P01S	3	2001	5.18
200132	2S/12W-35P01S	4	2001	8.30
200132	2S/12W-35P01S	5	2001	5.50
200132	2S/12W-35P01S	6	2001	27.98
200132	2S/12W-35P01S	7	2001	9.13
200132	2S/12W-35P01S	8	2001	4.85
200132	2S/12W-35P01S	9	2001	106.12
200132	2S/12W-35P01S	10	2001	131.33
200132	2S/12W-35P01S	11	2001	66.44
200132	2S/12W-35P01S	12	2001	60.37
200132	2S/12W-35P01S	1	2002	1.46
200132	2S/12W-35P01S	2	2002	54.81
200132	2S/12W-35P01S	3	2002	10.87
200132	2S/12W-35P01S	4	2002	0.10
200132	2S/12W-35P01S	5	2002	0.29
200132	2S/12W-35P01S	6	2002	121.13
200132	2S/12W-35P01S	7	2002	167.22
200132	2S/12W-35P01S	8	2002	146.32
200132	2S/12W-35P01S	9	2002	174.76

SFS
30R3

Downey
35P1

200132	2S/12W-35P01S	10	2002	33.34
200132	2S/12W-35P01S	11	2002	1.96
200132	2S/12W-35P01S	12	2002	0.00
200132	2S/12W-35P01S	1	2003	0.00
200132	2S/12W-35P01S	2	2003	0.60
200132	2S/12W-35P01S	3	2003	8.94
200132	2S/12W-35P01S	4	2003	177.07
200132	2S/12W-35P01S	5	2003	159.14
200134	2S/12W-36M06S	1	2001	0.17
200134	2S/12W-36M06S	2	2001	0.02
200134	2S/12W-36M06S	3	2001	0.06
200134	2S/12W-36M06S	4	2001	0.06
200134	2S/12W-36M06S	5	2001	0.08
200134	2S/12W-36M06S	6	2001	0.32
200134	2S/12W-36M06S	7	2001	0.19
200134	2S/12W-36M06S	8	2001	0.15
200134	2S/12W-36M06S	9	2001	0.04
200134	2S/12W-36M06S	10	2001	0.09
200134	2S/12W-36M06S	11	2001	0.02
200134	2S/12W-36M06S	12	2001	0.03
200134	2S/12W-36M06S	1	2002	0.06
200134	2S/12W-36M06S	2	2002	0.04
200134	2S/12W-36M06S	3	2002	0.04
200134	2S/12W-36M06S	4	2002	0.09
200134	2S/12W-36M06S	5	2002	0.18
200134	2S/12W-36M06S	6	2002	0.07
200134	2S/12W-36M06S	7	2002	0.03
200134	2S/12W-36M06S	8	2002	0.07
200134	2S/12W-36M06S	9	2002	0.04
200134	2S/12W-36M06S	10	2002	0.04
200134	2S/12W-36M06S	11	2002	0.05
200134	2S/12W-36M06S	12	2002	0.08
200134	2S/12W-36M06S	1	2003	0.11
200134	2S/12W-36M06S	2	2003	0.04
200134	2S/12W-36M06S	3	2003	0.08
200134	2S/12W-36M06S	4	2003	0.14
200134	2S/12W-36M06S	5	2003	0.15
200234	3S/11W-06C03S	1	2001	1.92
200234	3S/11W-06C03S	2	2001	1.65
200234	3S/11W-06C03S	3	2001	2.22
200234	3S/11W-06C03S	4	2001	1.93
200234	3S/11W-06C03S	5	2001	1.97
200234	3S/11W-06C03S	6	2001	2.41
200234	3S/11W-06C03S	7	2001	2.36
200234	3S/11W-06C03S	8	2001	2.75
200234	3S/11W-06C03S	9	2001	2.26
200234	3S/11W-06C03S	10	2001	2.55
200234	3S/11W-06C03S	11	2001	2.15
200234	3S/11W-06C03S	12	2001	1.58
200234	3S/11W-06C03S	1	2002	2.42
200234	3S/11W-06C03S	2	2002	3.59
200234	3S/11W-06C03S	3	2002	5.95

Pico Rivera
36m6

Rocky Mtn.
Fnd.
6C3

200234	3S/11W-06C03S	4	2002	3.71
200234	3S/11W-06C03S	5	2002	3.11
200234	3S/11W-06C03S	6	2002	4.70
200234	3S/11W-06C03S	7	2002	4.47
200234	3S/11W-06C03S	8	2002	5.27
200234	3S/11W-06C03S	9	2002	4.94
200234	3S/11W-06C03S	10	2002	3.01
200234	3S/11W-06C03S	11	2002	3.18
200234	3S/11W-06C03S	12	2002	3.44
200234	3S/11W-06C03S	1	2003	4.16
200234	3S/11W-06C03S	2	2003	3.70
200234	3S/11W-06C03S	3	2003	3.68
200234	3S/11W-06C03S	4	2003	4.15
200234	3S/11W-06C03S	5	2003	3.86
200235	3S/11W-06D03S	1	2001	0.00
200235	3S/11W-06D03S	2	2001	0.00
200235	3S/11W-06D03S	3	2001	0.00
200235	3S/11W-06D03S	4	2001	0.00
200235	3S/11W-06D03S	5	2001	0.16
200235	3S/11W-06D03S	6	2001	0.00
200235	3S/11W-06D03S	7	2001	0.11
200235	3S/11W-06D03S	8	2001	0.00
200235	3S/11W-06D03S	9	2001	0.00
200235	3S/11W-06D03S	10	2001	0.00
200235	3S/11W-06D03S	11	2001	0.00
200235	3S/11W-06D03S	12	2001	0.11
200235	3S/11W-06D03S	1	2002	0.00
200235	3S/11W-06D03S	2	2002	0.00
200235	3S/11W-06D03S	3	2002	0.30
200235	3S/11W-06D03S	4	2002	0.00
200235	3S/11W-06D03S	5	2002	0.00
200235	3S/11W-06D03S	6	2002	0.51
200235	3S/11W-06D03S	7	2002	0.00
200235	3S/11W-06D03S	8	2002	0.00
200235	3S/11W-06D03S	9	2002	0.21
200235	3S/11W-06D03S	10	2002	0.00
200235	3S/11W-06D03S	11	2002	0.00
200235	3S/11W-06D03S	12	2002	0.09
200235	3S/11W-06D03S	1	2003	0.00
200235	3S/11W-06D03S	2	2003	0.11
200235	3S/11W-06D03S	3	2003	0.00
200235	3S/11W-06D03S	4	2003	0.00
200235	3S/11W-06D03S	5	2003	0.00
200238	3S/11W-06N01S	1	2001	0.00
200238	3S/11W-06N01S	2	2001	0.01
200238	3S/11W-06N01S	3	2001	0.01
200238	3S/11W-06N01S	4	2001	0.30
200238	3S/11W-06N01S	5	2001	1.24
200238	3S/11W-06N01S	6	2001	1.31
200238	3S/11W-06N01S	7	2001	1.57
200238	3S/11W-06N01S	8	2001	2.86
200238	3S/11W-06N01S	9	2001	1.51

SFS
6D3

200238	3S/11W-06N01S	10	2001	1.41
200238	3S/11W-06N01S	11	2001	0.39
200238	3S/11W-06N01S	12	2001	0.00
200238	3S/11W-06N01S	1	2002	0.03
200238	3S/11W-06N01S	2	2002	1.18
200238	3S/11W-06N01S	3	2002	0.81
200238	3S/11W-06N01S	4	2002	1.17
200238	3S/11W-06N01S	5	2002	1.54
200238	3S/11W-06N01S	6	2002	2.19
200238	3S/11W-06N01S	7	2002	1.57
200238	3S/11W-06N01S	8	2002	1.80
200238	3S/11W-06N01S	9	2002	1.96
200238	3S/11W-06N01S	10	2002	1.85
200238	3S/11W-06N01S	11	2002	0.71
200238	3S/11W-06N01S	12	2002	0.21
200238	3S/11W-06N01S	1	2003	0.22
200238	3S/11W-06N01S	2	2003	0.01
200238	3S/11W-06N01S	3	2003	0.01
200238	3S/11W-06N01S	4	2003	0.22
200238	3S/11W-06N01S	5	2003	0.38
200239	3S/11W-06N02S	1	2001	0.04
200239	3S/11W-06N02S	2	2001	0.02
200239	3S/11W-06N02S	3	2001	0.06
200239	3S/11W-06N02S	4	2001	0.08
200239	3S/11W-06N02S	5	2001	0.08
200239	3S/11W-06N02S	6	2001	0.16
200239	3S/11W-06N02S	7	2001	0.20
200239	3S/11W-06N02S	8	2001	0.22
200239	3S/11W-06N02S	9	2001	0.18
200239	3S/11W-06N02S	10	2001	0.18
200239	3S/11W-06N02S	11	2001	0.11
200239	3S/11W-06N02S	12	2001	0.12
200239	3S/11W-06N02S	1	2002	0.08
200239	3S/11W-06N02S	2	2002	0.17
200239	3S/11W-06N02S	3	2002	0.26
200239	3S/11W-06N02S	4	2002	0.18
200239	3S/11W-06N02S	5	2002	0.32
200239	3S/11W-06N02S	6	2002	0.13
200239	3S/11W-06N02S	7	2002	0.11
200239	3S/11W-06N02S	8	2002	0.05
200239	3S/11W-06N02S	9	2002	0.13
200239	3S/11W-06N02S	10	2002	0.10
200239	3S/11W-06N02S	11	2002	0.11
200239	3S/11W-06N02S	12	2002	0.07
200239	3S/11W-06N02S	1	2003	0.09
200239	3S/11W-06N02S	2	2003	0.07
200239	3S/11W-06N02S	3	2003	0.07
200239	3S/11W-06N02S	4	2003	0.11
200239	3S/11W-06N02S	5	2003	0.11
200245	3S/11W-07E02S	1	2001	40.51
200245	3S/11W-07E02S	2	2001	64.66
200245	3S/11W-07E02S	3	2001	71.46

Little Lake

6N1

HaThaway

6N2

200245	3S/11W-07E02S	4	2001	69.88
200245	3S/11W-07E02S	5	2001	72.53
200245	3S/11W-07E02S	6	2001	62.10
200245	3S/11W-07E02S	7	2001	71.87
200245	3S/11W-07E02S	8	2001	67.61
200245	3S/11W-07E02S	9	2001	48.27
200245	3S/11W-07E02S	10	2001	20.30
200245	3S/11W-07E02S	11	2001	0.00
200245	3S/11W-07E02S	12	2001	0.00
200245	3S/11W-07E02S	1	2002	0.00
200245	3S/11W-07E02S	2	2002	0.00
200245	3S/11W-07E02S	3	2002	0.00
200245	3S/11W-07E02S	4	2002	0.00
200245	3S/11W-07E02S	5	2002	0.00
200245	3S/11W-07E02S	6	2002	0.00
200245	3S/11W-07E02S	7	2002	0.00
200245	3S/11W-07E02S	8	2002	0.00
200245	3S/11W-07E02S	9	2002	0.00
200245	3S/11W-07E02S	10	2002	0.00
200245	3S/11W-07E02S	11	2002	0.00
200245	3S/11W-07E02S	12	2002	0.00
200245	3S/11W-07E02S	1	2003	0.00
200245	3S/11W-07E02S	2	2003	0.00
200245	3S/11W-07E02S	3	2003	0.00
200245	3S/11W-07E02S	4	2003	0.00
200245	3S/11W-07E02S	5	2003	0.00
200279	3S/12W-01F08S	1	2001	0.00
200279	3S/12W-01F08S	2	2001	0.00
200279	3S/12W-01F08S	3	2001	0.00
200279	3S/12W-01F08S	4	2001	0.00
200279	3S/12W-01F08S	5	2001	0.00
200279	3S/12W-01F08S	6	2001	0.00
200279	3S/12W-01F08S	7	2001	0.00
200279	3S/12W-01F08S	8	2001	0.00
200279	3S/12W-01F08S	9	2001	0.00
200279	3S/12W-01F08S	10	2001	0.00
200279	3S/12W-01F08S	11	2001	0.00
200279	3S/12W-01F08S	12	2001	0.00
200279	3S/12W-01F08S	1	2002	0.00
200279	3S/12W-01F08S	2	2002	0.00
200279	3S/12W-01F08S	3	2002	0.00
200279	3S/12W-01F08S	4	2002	0.00
200279	3S/12W-01F08S	5	2002	0.00
200279	3S/12W-01F08S	6	2002	0.00
200279	3S/12W-01F08S	7	2002	0.00
200279	3S/12W-01F08S	8	2002	0.00
200279	3S/12W-01F08S	9	2002	0.00
200279	3S/12W-01F08S	10	2002	0.00
200279	3S/12W-01F08S	11	2002	0.00
200279	3S/12W-01F08S	12	2002	0.00
200279	3S/12W-01F08S	1	2003	0.00
200279	3S/12W-01F08S	2	2003	0.00

SCWC
7E2

SFS
1F8

200279	3S/12W-01F08S	3	2003	0.00
200279	3S/12W-01F08S	4	2003	0.00
200279	3S/12W-01F08S	5	2003	0.00
200280	3S/12W-01G09S	1	2001	0.00
200280	3S/12W-01G09S	2	2001	0.00
200280	3S/12W-01G09S	3	2001	0.00
200280	3S/12W-01G09S	4	2001	0.00
200280	3S/12W-01G09S	5	2001	0.00
200280	3S/12W-01G09S	6	2001	0.00
200280	3S/12W-01G09S	7	2001	0.00
200280	3S/12W-01G09S	8	2001	0.00
200280	3S/12W-01G09S	9	2001	0.00
200280	3S/12W-01G09S	10	2001	0.00
200280	3S/12W-01G09S	11	2001	0.00
200280	3S/12W-01G09S	12	2001	0.00
200280	3S/12W-01G09S	1	2002	0.00
200280	3S/12W-01G09S	2	2002	0.00
200280	3S/12W-01G09S	3	2002	0.00
200280	3S/12W-01G09S	4	2002	0.00
200280	3S/12W-01G09S	5	2002	0.00
200280	3S/12W-01G09S	6	2002	0.00
200280	3S/12W-01G09S	7	2002	0.00
200280	3S/12W-01G09S	8	2002	0.00
200280	3S/12W-01G09S	9	2002	0.00
200280	3S/12W-01G09S	10	2002	0.00
200280	3S/12W-01G09S	11	2002	0.00
200280	3S/12W-01G09S	12	2002	0.00
200280	3S/12W-01G09S	1	2003	0.00
200280	3S/12W-01G09S	2	2003	0.00
200280	3S/12W-01G09S	3	2003	0.00
200280	3S/12W-01G09S	4	2003	0.00
200280	3S/12W-01G09S	5	2003	0.00
200281	3S/12W-01K09S	1	2001	0.08
200281	3S/12W-01K09S	2	2001	0.08
200281	3S/12W-01K09S	3	2001	0.08
200281	3S/12W-01K09S	4	2001	0.08
200281	3S/12W-01K09S	5	2001	0.08
200281	3S/12W-01K09S	6	2001	0.08
200281	3S/12W-01K09S	7	2001	0.08
200281	3S/12W-01K09S	8	2001	0.08
200281	3S/12W-01K09S	9	2001	0.08
200281	3S/12W-01K09S	10	2001	0.08
200281	3S/12W-01K09S	11	2001	0.08
200281	3S/12W-01K09S	12	2001	0.08
200281	3S/12W-01K09S	1	2002	0.08
200281	3S/12W-01K09S	2	2002	0.08
200281	3S/12W-01K09S	3	2002	0.08
200281	3S/12W-01K09S	4	2002	0.08
200281	3S/12W-01K09S	5	2002	0.08
200281	3S/12W-01K09S	6	2002	0.08
200281	3S/12W-01K09S	7	2002	0.08
200281	3S/12W-01K09S	8	2002	0.08

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Paradise Mem.

1K9

200281	3S/12W-01K09S	9	2002	0.08
200281	3S/12W-01K09S	10	2002	0.08
200281	3S/12W-01K09S	11	2002	0.08
200281	3S/12W-01K09S	12	2002	0.08
200281	3S/12W-01K09S	1	2003	0.08
200281	3S/12W-01K09S	2	2003	0.08
200281	3S/12W-01K09S	3	2003	0.08
200281	3S/12W-01K09S	4	2003	0.08
200281	3S/12W-01K09S	5	2003	0.08
200282	3S/12W-02H04S	1	2001	1.89
200282	3S/12W-02H04S	2	2001	0.00
200282	3S/12W-02H04S	3	2001	0.63
200282	3S/12W-02H04S	4	2001	3.11
200282	3S/12W-02H04S	5	2001	4.37
200282	3S/12W-02H04S	6	2001	5.58
200282	3S/12W-02H04S	7	2001	3.45
200282	3S/12W-02H04S	8	2001	3.76
200282	3S/12W-02H04S	9	2001	3.72
200282	3S/12W-02H04S	10	2001	0.00
200282	3S/12W-02H04S	11	2001	1.11
200282	3S/12W-02H04S	12	2001	0.21
200282	3S/12W-02H04S	1	2002	0.45
200282	3S/12W-02H04S	2	2002	4.94
200282	3S/12W-02H04S	3	2002	0.74
200282	3S/12W-02H04S	4	2002	1.85
200282	3S/12W-02H04S	5	2002	8.37
200282	3S/12W-02H04S	6	2002	8.53
200282	3S/12W-02H04S	7	2002	9.45
200282	3S/12W-02H04S	8	2002	3.23
200282	3S/12W-02H04S	9	2002	12.76
200282	3S/12W-02H04S	10	2002	6.44
200282	3S/12W-02H04S	11	2002	19.24
200282	3S/12W-02H04S	12	2002	9.09
200282	3S/12W-02H04S	1	2003	0.00
200282	3S/12W-02H04S	2	2003	1.72
200282	3S/12W-02H04S	3	2003	9.72
200282	3S/12W-02H04S	4	2003	16.27
200282	3S/12W-02H04S	5	2003	26.29
200284	3S/12W-02R01S	1	2001	1.12
200284	3S/12W-02R01S	2	2001	35.06
200284	3S/12W-02R01S	3	2001	51.44
200284	3S/12W-02R01S	4	2001	51.24
200284	3S/12W-02R01S	5	2001	60.39
200284	3S/12W-02R01S	6	2001	58.42
200284	3S/12W-02R01S	7	2001	58.62
200284	3S/12W-02R01S	8	2001	59.64
200284	3S/12W-02R01S	9	2001	48.66
200284	3S/12W-02R01S	10	2001	60.04
200284	3S/12W-02R01S	11	2001	52.00
200284	3S/12W-02R01S	12	2001	49.32
200284	3S/12W-02R01S	1	2002	45.73
200284	3S/12W-02R01S	2	2002	31.21

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2H4

200284	3S/12W-02R01S	3	2002	36.18
200284	3S/12W-02R01S	4	2002	31.67
200284	3S/12W-02R01S	5	2002	39.16
200284	3S/12W-02R01S	6	2002	45.29
200284	3S/12W-02R01S	7	2002	53.35
200284	3S/12W-02R01S	8	2002	52.71
200284	3S/12W-02R01S	9	2002	47.39
200284	3S/12W-02R01S	10	2002	43.61
200284	3S/12W-02R01S	11	2002	30.22
200284	3S/12W-02R01S	12	2002	43.11
200284	3S/12W-02R01S	1	2003	50.73
200284	3S/12W-02R01S	2	2003	41.90
200284	3S/12W-02R01S	3	2003	47.19
200284	3S/12W-02R01S	4	2003	47.92
200284	3S/12W-02R01S	5	2003	55.02
200315	3S/12W-11A06S	1	2001	0.66
200315	3S/12W-11A06S	2	2001	0.48
200315	3S/12W-11A06S	3	2001	0.00
200315	3S/12W-11A06S	4	2001	0.08
200315	3S/12W-11A06S	5	2001	0.03
200315	3S/12W-11A06S	6	2001	0.73
200315	3S/12W-11A06S	7	2001	0.43
200315	3S/12W-11A06S	8	2001	4.20
200315	3S/12W-11A06S	9	2001	1.96
200315	3S/12W-11A06S	10	2001	2.78
200315	3S/12W-11A06S	11	2001	1.20
200315	3S/12W-11A06S	12	2001	0.22
200315	3S/12W-11A06S	1	2002	0.00
200315	3S/12W-11A06S	2	2002	1.32
200315	3S/12W-11A06S	3	2002	1.87
200315	3S/12W-11A06S	4	2002	1.64
200315	3S/12W-11A06S	5	2002	2.54
200315	3S/12W-11A06S	6	2002	4.64
200315	3S/12W-11A06S	7	2002	4.01
200315	3S/12W-11A06S	8	2002	2.99
200315	3S/12W-11A06S	9	2002	3.66
200315	3S/12W-11A06S	10	2002	1.69
200315	3S/12W-11A06S	11	2002	0.58
200315	3S/12W-11A06S	12	2002	0.22
200315	3S/12W-11A06S	1	2003	0.60
200315	3S/12W-11A06S	2	2003	0.00
200315	3S/12W-11A06S	3	2003	0.00
200315	3S/12W-11A06S	4	2003	0.21
200315	3S/12W-11A06S	5	2003	0.00
200319	3S/12W-12A02S	1	2001	0.00
200319	3S/12W-12A02S	2	2001	0.00
200319	3S/12W-12A02S	3	2001	0.00
200319	3S/12W-12A02S	4	2001	0.00
200319	3S/12W-12A02S	5	2001	0.00
200319	3S/12W-12A02S	6	2001	0.00
200319	3S/12W-12A02S	7	2001	0.00
200319	3S/12W-12A02S	8	2001	0.00

SCWC
2R1

SCE
11A6

SCWC
12A2

200319 3S/12W-12A02S	9	2001	0.00
200319 3S/12W-12A02S	10	2001	0.00
200319 3S/12W-12A02S	11	2001	0.00
200319 3S/12W-12A02S	12	2001	0.00
200319 3S/12W-12A02S	1	2002	0.00
200319 3S/12W-12A02S	2	2002	0.00
200319 3S/12W-12A02S	3	2002	0.00
200319 3S/12W-12A02S	4	2002	0.00
200319 3S/12W-12A02S	5	2002	0.00
200319 3S/12W-12A02S	6	2002	0.00
200319 3S/12W-12A02S	7	2002	0.00
200319 3S/12W-12A02S	8	2002	0.00
200319 3S/12W-12A02S	9	2002	0.00
200319 3S/12W-12A02S	10	2002	0.00
200319 3S/12W-12A02S	11	2002	0.00
200319 3S/12W-12A02S	12	2002	0.00
200319 3S/12W-12A02S	1	2003	0.00
200319 3S/12W-12A02S	2	2003	0.00
200319 3S/12W-12A02S	3	2003	0.00
200319 3S/12W-12A02S	4	2003	0.00
200319 3S/12W-12A02S	5	2003	0.00

WRD ID	State Well Number	Sample Date	Storet	Finding	Units	Constituent
200022	2S/11W-30R03S	03/27/2002	32101	0	UG/L	Bromodichloromethane
200022	2S/11W-30R03S	03/27/2002	32102	0	UG/L	Carbon Tetrachloride
200022	2S/11W-30R03S	03/27/2002	32104	0	UG/L	Bromoform
200022	2S/11W-30R03S	03/27/2002	32105	0	UG/L	Chlorodibromomethane
200022	2S/11W-30R03S	03/27/2002	32106	0	UG/L	Chloroform (Trichloromethane)
200022	2S/11W-30R03S	03/27/2002	34010	0	UG/L	Toluene
200022	2S/11W-30R03S	03/27/2002	34030	0	UG/L	Benzene
200022	2S/11W-30R03S	03/27/2002	34273	0	UG/L	Bis (2-Chloroethyl) Ether
200022	2S/11W-30R03S	03/27/2002	34301	0	UG/L	Chlorobenzene
200022	2S/11W-30R03S	03/27/2002	34311	0	UG/L	Chloroethane
200022	2S/11W-30R03S	03/27/2002	34371	0	UG/L	Ethyl Benzene
200022	2S/11W-30R03S	03/27/2002	34391	0	UG/L	Hexachlorobutadiene
200022	2S/11W-30R03S	03/27/2002	34413	0	UG/L	Bromomethane (Methyl Bromide)
200022	2S/11W-30R03S	03/27/2002	34418	0	UG/L	Chloromethane (Methyl Chloride)
200022	2S/11W-30R03S	03/27/2002	34423	0	UG/L	Methylene Chloride
200022	2S/11W-30R03S	03/27/2002	34475	0	UG/L	Tetrachloroethylene (PCE)
200022	2S/11W-30R03S	03/27/2002	34488	0	UG/L	Fluorotrichloromethane (Freon11)
200022	2S/11W-30R03S	03/27/2002	34496	0	UG/L	1,1-Dichloroethane
200022	2S/11W-30R03S	03/27/2002	34501	0	UG/L	1,1-Dichloroethylene
200022	2S/11W-30R03S	03/27/2002	34506	0	UG/L	1,1,1-Trichloroethane
200022	2S/11W-30R03S	03/27/2002	34511	0	UG/L	1,1,2-Trichloroethane
200022	2S/11W-30R03S	03/27/2002	34516	0	UG/L	1,1,2,2-Tetrachloroethane
200022	2S/11W-30R03S	03/27/2002	34531	0	UG/L	1,2-Dichloroethane
200022	2S/11W-30R03S	03/27/2002	34536	0	UG/L	o-Dichlorobenzene (1,2-DCB)
200022	2S/11W-30R03S	03/27/2002	34541	0	UG/L	1,2-Dichloropropane
200022	2S/11W-30R03S	03/27/2002	34546	0	UG/L	trans-1,2-Dichloroethylene
200022	2S/11W-30R03S	03/27/2002	34551	0	UG/L	1,2,4-Trichlorobenzene
200022	2S/11W-30R03S	03/27/2002	34561	0	UG/L	1,3-Dichloropropene (Total)
200022	2S/11W-30R03S	03/27/2002	34566	0	UG/L	1,3-Dichlorobenzene
200022	2S/11W-30R03S	03/27/2002	34571	0	UG/L	p-Dichlorobenzene
200022	2S/11W-30R03S	03/27/2002	34576	0	UG/L	2-Chloroethyl Vinyl Ether
200022	2S/11W-30R03S	03/27/2002	34576	0	UG/L	2-Chloroethylvinylether
200022	2S/11W-30R03S	03/27/2002	34668	0	UG/L	Dichlorodifluoromethane
200022	2S/11W-30R03S	03/27/2002	34696	0	UG/L	Naphthalene
200022	2S/11W-30R03S	03/27/2002	39175	0	UG/L	Vinyl chloride (VC)
200022	2S/11W-30R03S	03/27/2002	39180	0	UG/L	Trichloroethylene (TCE)
200022	2S/11W-30R03S	03/27/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200022	2S/11W-30R03S	03/27/2002	71850	7.6	MG/L	Nitrate (as NO3)
200022	2S/11W-30R03S	03/27/2002	77093	0	UG/L	cis-1,2-Dichloroethylene
200022	2S/11W-30R03S	03/27/2002	77128	0	UG/L	Styrene
200022	2S/11W-30R03S	03/27/2002	77135	0	UG/L	o-Xylene
200022	2S/11W-30R03S	03/27/2002	77168	0	UG/L	1,1-Dichloropropene
200022	2S/11W-30R03S	03/27/2002	77170	0	UG/L	2,2-Dichloropropane
200022	2S/11W-30R03S	03/27/2002	77173	0	UG/L	1,3-Dichloropropane
200022	2S/11W-30R03S	03/27/2002	77222	0	UG/L	1,2,4-Trimethylbenzene
200022	2S/11W-30R03S	03/27/2002	77223	0	UG/L	Isopropylbenzene
200022	2S/11W-30R03S	03/27/2002	77224	0	UG/L	n-Propylbenzene
200022	2S/11W-30R03S	03/27/2002	77226	0	UG/L	1,3,5-Trimethylbenzene
200022	2S/11W-30R03S	03/27/2002	77350	0	UG/L	sec-Butylbenzene
200022	2S/11W-30R03S	03/27/2002	77353	0	UG/L	tert-Butylbenzene
200022	2S/11W-30R03S	03/27/2002	77443	0	UG/L	1,2,3-Trichloropropane
200022	2S/11W-30R03S	03/27/2002	77562	0	UG/L	1,1,1,2-Tetrachloroethane
200022	2S/11W-30R03S	03/27/2002	77596	0	UG/L	Dibromomethane
200022	2S/11W-30R03S	03/27/2002	77613	0	UG/L	1,2,3-Trichlorobenzene

200022	2S/11W-30R03S	03/27/2002	78132	0	UG/L	P-Xylene
200022	2S/11W-30R03S	03/27/2002	81551	0	UG/L	Total Xylenes
200022	2S/11W-30R03S	03/27/2002	81555	0	UG/L	Bromobenzene
200022	2S/11W-30R03S	03/27/2002	81595	0	UG/L	2-Butanone (MEK)
200022	2S/11W-30R03S	03/27/2002	81596	0	UG/L	4-Methyl-2-Pentanone (MIBK)
200022	2S/11W-30R03S	03/27/2002	81611	0	UG/L	Trichlorotrifluoroethane (Freon 113)
200022	2S/11W-30R03S	03/27/2002	81710	0	UG/L	M-Xylene
200022	2S/11W-30R03S	03/27/2002	82080	0	UG/L	Total Trihalomethanes
200022	2S/11W-30R03S	03/27/2002	A-008	0	UG/L	o-Chlorotoluene
200022	2S/11W-30R03S	03/27/2002	A-009	0	UG/L	p-Chlorotoluene
200022	2S/11W-30R03S	03/27/2002	A-010	0	UG/L	n-Butylbenzene
200022	2S/11W-30R03S	03/27/2002	A-011	0	UG/L	p-Isopropyltoluene
200022	2S/11W-30R03S	03/27/2002	A-012	0	UG/L	Bromochloromethane
200022	2S/11W-30R03S	03/27/2002	A-014	0	UG/L	m,p-Xylenes
200022	2S/11W-30R03S	03/27/2002	A-033	0	UG/L	Ethyl Tertiary Butyl Ether
200022	2S/11W-30R03S	03/27/2002	A-034	0	UG/L	Tertiary Amyl Methyl Ether
200022	2S/11W-30R03S	06/26/2002	32101	0	UG/L	Bromodichloromethane
200022	2S/11W-30R03S	06/26/2002	32102	0	UG/L	Carbon Tetrachloride
200022	2S/11W-30R03S	06/26/2002	32104	0	UG/L	Bromoform
200022	2S/11W-30R03S	06/26/2002	32105	0	UG/L	Chlorodibromomethane
200022	2S/11W-30R03S	06/26/2002	32106	0	UG/L	Chloroform (Trichloromethane)
200022	2S/11W-30R03S	06/26/2002	34010	0	UG/L	Toluene
200022	2S/11W-30R03S	06/26/2002	34030	0	UG/L	Benzene
200022	2S/11W-30R03S	06/26/2002	34301	0	UG/L	Chlorobenzene
200022	2S/11W-30R03S	06/26/2002	34311	0	UG/L	Chloroethane
200022	2S/11W-30R03S	06/26/2002	34371	0	UG/L	Ethyl Benzene
200022	2S/11W-30R03S	06/26/2002	34391	0	UG/L	Hexachlorobutadiene
200022	2S/11W-30R03S	06/26/2002	34413	0	UG/L	Bromomethane (Methyl Bromide)
200022	2S/11W-30R03S	06/26/2002	34418	0	UG/L	Chloromethane (Methyl Chloride)
200022	2S/11W-30R03S	06/26/2002	34423	0	UG/L	Methylene Chloride
200022	2S/11W-30R03S	06/26/2002	34475	0	UG/L	Tetrachloroethylene (PCE)
200022	2S/11W-30R03S	06/26/2002	34488	0	UG/L	Fluorotrichloromethane (Freon11)
200022	2S/11W-30R03S	06/26/2002	34496	0	UG/L	1,1-Dichloroethane
200022	2S/11W-30R03S	06/26/2002	34501	0	UG/L	1,1-Dichloroethylene
200022	2S/11W-30R03S	06/26/2002	34506	0	UG/L	1,1,1-Trichloroethane
200022	2S/11W-30R03S	06/26/2002	34511	0	UG/L	1,1,2-Trichloroethane
200022	2S/11W-30R03S	06/26/2002	34516	0	UG/L	1,1,2,2-Tetrachloroethane
200022	2S/11W-30R03S	06/26/2002	34531	0	UG/L	1,2-Dichloroethane
200022	2S/11W-30R03S	06/26/2002	34536	0	UG/L	o-Dichlorobenzene (1,2-DCB)
200022	2S/11W-30R03S	06/26/2002	34541	0	UG/L	1,2-Dichloropropane
200022	2S/11W-30R03S	06/26/2002	34546	0	UG/L	trans-1,2-Dichloroethylene
200022	2S/11W-30R03S	06/26/2002	34551	0	UG/L	1,2,4-Trichlorobenzene
200022	2S/11W-30R03S	06/26/2002	34561	0	UG/L	1,3-Dichloropropene (Total)
200022	2S/11W-30R03S	06/26/2002	34566	0	UG/L	1,3-Dichlorobenzene
200022	2S/11W-30R03S	06/26/2002	34571	0	UG/L	p-Dichlorobenzene
200022	2S/11W-30R03S	06/26/2002	34576	0	UG/L	2-Chloroethyl Vinyl Ether
200022	2S/11W-30R03S	06/26/2002	34576	0	UG/L	2-Chloroethylvinylether
200022	2S/11W-30R03S	06/26/2002	34668	0	UG/L	Dichlorodifluoromethane
200022	2S/11W-30R03S	06/26/2002	34696	0	UG/L	Naphthalene
200022	2S/11W-30R03S	06/26/2002	39175	0	UG/L	Vinyl chloride (VC)
200022	2S/11W-30R03S	06/26/2002	39180	1.1	UG/L	Trichloroethylene (TCE)
200022	2S/11W-30R03S	06/26/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200022	2S/11W-30R03S	06/26/2002	77093	0	UG/L	cis-1,2-Dichloroethylene
200022	2S/11W-30R03S	06/26/2002	77128	0	UG/L	Styrene
200022	2S/11W-30R03S	06/26/2002	77135	0	UG/L	o-Xylene

200022	2S/11W-30R03S	06/26/2002	77168	0	UG/L	1,1-Dichloropropene
200022	2S/11W-30R03S	06/26/2002	77170	0	UG/L	2,2-Dichloropropane
200022	2S/11W-30R03S	06/26/2002	77173	0	UG/L	1,3-Dichloropropane
200022	2S/11W-30R03S	06/26/2002	77222	0	UG/L	1,2,4-Trimethylbenzene
200022	2S/11W-30R03S	06/26/2002	77223	0	UG/L	Isopropylbenzene
200022	2S/11W-30R03S	06/26/2002	77224	0	UG/L	n-Propylbenzene
200022	2S/11W-30R03S	06/26/2002	77226	0	UG/L	1,3,5-Trimethylbenzene
200022	2S/11W-30R03S	06/26/2002	77350	0	UG/L	sec-Butylbenzene
200022	2S/11W-30R03S	06/26/2002	77353	0	UG/L	tert-Butylbenzene
200022	2S/11W-30R03S	06/26/2002	77443	0	UG/L	1,2,3-Trichloropropane
200022	2S/11W-30R03S	06/26/2002	77562	0	UG/L	1,1,1,2-Tetrachloroethane
200022	2S/11W-30R03S	06/26/2002	77596	0	UG/L	Dibromomethane
200022	2S/11W-30R03S	06/26/2002	77613	0	UG/L	1,2,3-Trichlorobenzene
200022	2S/11W-30R03S	06/26/2002	78132	0	UG/L	P-Xylene
200022	2S/11W-30R03S	06/26/2002	81551	0	UG/L	Total Xylenes
200022	2S/11W-30R03S	06/26/2002	81555	0	UG/L	Bromobenzene
200022	2S/11W-30R03S	06/26/2002	81595	0	UG/L	2-Butanone (MEK)
200022	2S/11W-30R03S	06/26/2002	81596	0	UG/L	4-Methyl-2-Pentanone (MIBK)
200022	2S/11W-30R03S	06/26/2002	81611	0	UG/L	Trichlorotrifluoroethane (Freon 113)
200022	2S/11W-30R03S	06/26/2002	81710	0	UG/L	M-Xylene
200022	2S/11W-30R03S	06/26/2002	82080	0	UG/L	Total Trihalomethanes
200022	2S/11W-30R03S	06/26/2002	A-008	0	UG/L	o-Chlorotoluene
200022	2S/11W-30R03S	06/26/2002	A-009	0	UG/L	p-Chlorotoluene
200022	2S/11W-30R03S	06/26/2002	A-010	0	UG/L	n-Butylbenzene
200022	2S/11W-30R03S	06/26/2002	A-011	0	UG/L	p-Isopropyltoluene
200022	2S/11W-30R03S	06/26/2002	A-012	0	UG/L	Bromochloromethane
200022	2S/11W-30R03S	06/26/2002	A-014	0	UG/L	m,p-Xylenes
200022	2S/11W-30R03S	06/26/2002	A-033	0	UG/L	Ethyl Tertiary Butyl Ether
200022	2S/11W-30R03S	06/26/2002	A-034	0	UG/L	Tertiary Amyl Methyl Ether
200022	2S/11W-30R03S	06/26/2002	A-036	0	UG/L	Di-Isopropyl Ether
200132	2S/12W-35P01S	02/21/2002	00010	17.2	C	Temperature
200132	2S/12W-35P01S	02/21/2002	00095	870	US	Specific Conductance
200132	2S/12W-35P01S	02/21/2002	00403	7.5		Lab pH
200132	2S/12W-35P01S	02/21/2002	00410	190	MG/L	Alkalinity
200132	2S/12W-35P01S	02/21/2002	00916	99	MG/L	Calcium
200132	2S/12W-35P01S	02/21/2002	01042	0	UG/L	Copper
200132	2S/12W-35P01S	02/21/2002	01051	0	UG/L	Lead
200132	2S/12W-35P01S	02/21/2002	01501	2.51	PCI/L	Alpha, Gross
200132	2S/12W-35P01S	02/21/2002	01501	2.51	PCI/L	Gross Alpha
200132	2S/12W-35P01S	02/21/2002	01502	1.57	PCI/L	Alpha, Two Sigma Error
200132	2S/12W-35P01S	02/21/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200132	2S/12W-35P01S	02/21/2002	71850	16	MG/L	Nitrate (as NO3)
200132	2S/12W-35P01S	05/04/2002	01501	3.44	PCI/L	Alpha, Gross
200132	2S/12W-35P01S	05/04/2002	01501	3.44	PCI/L	Gross Alpha
200132	2S/12W-35P01S	05/04/2002	01502	2.12	PCI/L	Alpha, Two Sigma Error
200132	2S/12W-35P01S	05/14/2002	00010	16.1	C	Temperature
200132	2S/12W-35P01S	05/14/2002	00095	870	US	Specific Conductance
200132	2S/12W-35P01S	05/14/2002	00403	7.6		Lab pH
200132	2S/12W-35P01S	05/14/2002	00410	190	MG/L	Alkalinity
200132	2S/12W-35P01S	05/14/2002	00916	100	MG/L	Calcium
200132	2S/12W-35P01S	05/14/2002	01042	0	UG/L	Copper
200132	2S/12W-35P01S	05/14/2002	01051	0	UG/L	Lead
200132	2S/12W-35P01S	05/14/2002	01501	3.44	PCI/L	Alpha, Gross
200132	2S/12W-35P01S	05/14/2002	01501	3.44	PCI/L	Gross Alpha
200132	2S/12W-35P01S	05/14/2002	01502	2.12	PCI/L	Alpha, Two Sigma Error

200132	2S/12W-35P01S	05/14/2002	09501	0	PCI/L	Radium 226
200132	2S/12W-35P01S	05/14/2002	09502	0.364	PCI/L	Radium 226 Counting Error
200132	2S/12W-35P01S	05/14/2002	28012	5.63	PCI/L	Uranium
200132	2S/12W-35P01S	05/14/2002	28012	5.63	PCI/L	Uranium, Minimal Detectable
200132	2S/12W-35P01S	05/14/2002	A-028	1.24	PCI/L	Uranium Counting Error
200134	2S/12W-36M06S	06/17/2002	32101	0	UG/L	Bromodichloromethane
200134	2S/12W-36M06S	06/17/2002	32102	0	UG/L	Carbon Tetrachloride
200134	2S/12W-36M06S	06/17/2002	32104	0	UG/L	Bromoform
200134	2S/12W-36M06S	06/17/2002	32105	0	UG/L	Chlorodibromomethane
200134	2S/12W-36M06S	06/17/2002	32106	0	UG/L	Chloroform (Trichloromethane)
200134	2S/12W-36M06S	06/17/2002	34010	0	UG/L	Toluene
200134	2S/12W-36M06S	06/17/2002	34030	0	UG/L	Benzene
200134	2S/12W-36M06S	06/17/2002	34301	0	UG/L	Chlorobenzene
200134	2S/12W-36M06S	06/17/2002	34311	0	UG/L	Chloroethane
200134	2S/12W-36M06S	06/17/2002	34371	0	UG/L	Ethyl Benzene
200134	2S/12W-36M06S	06/17/2002	34391	0	UG/L	Hexachlorobutadiene
200134	2S/12W-36M06S	06/17/2002	34413	0	UG/L	Bromomethane (Methyl Bromide)
200134	2S/12W-36M06S	06/17/2002	34418	0	UG/L	Chloromethane (Methyl Chloride)
200134	2S/12W-36M06S	06/17/2002	34423	0	UG/L	Methylene Chloride
200134	2S/12W-36M06S	06/17/2002	34475	3.1	UG/L	Tetrachloroethylene (PCE)
200134	2S/12W-36M06S	06/17/2002	34488	0	UG/L	Fluorotrichloromethane (Freon11)
200134	2S/12W-36M06S	06/17/2002	34496	0	UG/L	1,1-Dichloroethane
200134	2S/12W-36M06S	06/17/2002	34501	0	UG/L	1,1-Dichloroethylene
200134	2S/12W-36M06S	06/17/2002	34506	0	UG/L	1,1,1-Trichloroethane
200134	2S/12W-36M06S	06/17/2002	34511	0	UG/L	1,1,2-Trichloroethane
200134	2S/12W-36M06S	06/17/2002	34516	0	UG/L	1,1,2,2-Tetrachloroethane
200134	2S/12W-36M06S	06/17/2002	34531	0	UG/L	1,2-Dichloroethane
200134	2S/12W-36M06S	06/17/2002	34536	0	UG/L	o-Dichlorobenzene (1,2-DCB)
200134	2S/12W-36M06S	06/17/2002	34541	0	UG/L	1,2-Dichloropropane
200134	2S/12W-36M06S	06/17/2002	34546	0	UG/L	trans-1,2-Dichloroethylene
200134	2S/12W-36M06S	06/17/2002	34551	0	UG/L	1,2,4-Trichlorobenzene
200134	2S/12W-36M06S	06/17/2002	34561	0	UG/L	1,3-Dichloropropene (Total)
200134	2S/12W-36M06S	06/17/2002	34566	0	UG/L	1,3-Dichlorobenzene
200134	2S/12W-36M06S	06/17/2002	34571	0	UG/L	p-Dichlorobenzene
200134	2S/12W-36M06S	06/17/2002	34576	0	UG/L	2-Chloroethyl Vinyl Ether
200134	2S/12W-36M06S	06/17/2002	34576	0	UG/L	2-Chloroethylvinylether
200134	2S/12W-36M06S	06/17/2002	34668	0	UG/L	Dichlorodifluoromethane
200134	2S/12W-36M06S	06/17/2002	34696	0	UG/L	Naphthalene
200134	2S/12W-36M06S	06/17/2002	39175	0	UG/L	Vinyl chloride (VC)
200134	2S/12W-36M06S	06/17/2002	39180	0	UG/L	Trichloroethylene (TCE)
200134	2S/12W-36M06S	06/17/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200134	2S/12W-36M06S	06/17/2002	71850	12	MG/L	Nitrate (as NO3)
200134	2S/12W-36M06S	06/17/2002	77093	0	UG/L	cis-1,2-Dichloroethylene
200134	2S/12W-36M06S	06/17/2002	77128	0	UG/L	Styrene
200134	2S/12W-36M06S	06/17/2002	77135	0	UG/L	o-Xylene
200134	2S/12W-36M06S	06/17/2002	77168	0	UG/L	1,1-Dichloropropene
200134	2S/12W-36M06S	06/17/2002	77170	0	UG/L	2,2-Dichloropropane
200134	2S/12W-36M06S	06/17/2002	77173	0	UG/L	1,3-Dichloropropane
200134	2S/12W-36M06S	06/17/2002	77222	0	UG/L	1,2,4-Trimethylbenzene
200134	2S/12W-36M06S	06/17/2002	77223	0	UG/L	Isopropylbenzene
200134	2S/12W-36M06S	06/17/2002	77224	0	UG/L	n-Propylbenzene
200134	2S/12W-36M06S	06/17/2002	77226	0	UG/L	1,3,5-Trimethylbenzene
200134	2S/12W-36M06S	06/17/2002	77350	0	UG/L	sec-Butylbenzene
200134	2S/12W-36M06S	06/17/2002	77353	0	UG/L	tert-Butylbenzene
200134	2S/12W-36M06S	06/17/2002	77443	0	UG/L	1,2,3-Trichloropropane

200284	3S/12W-02R01S	02/14/2002	34371	0	UG/L	Ethyl Benzene
200284	3S/12W-02R01S	02/14/2002	34391	0	UG/L	Hexachlorobutadiene
200284	3S/12W-02R01S	02/14/2002	34413	0	UG/L	Bromomethane (Methyl Bromide)
200284	3S/12W-02R01S	02/14/2002	34418	0	UG/L	Chloromethane (Methyl Chloride)
200284	3S/12W-02R01S	02/14/2002	34423	0	UG/L	Methylene Chloride
200284	3S/12W-02R01S	02/14/2002	34475	0	UG/L	Tetrachloroethylene (PCE)
200284	3S/12W-02R01S	02/14/2002	34488	0	UG/L	Fluorotrichloromethane (Freon11)
200284	3S/12W-02R01S	02/14/2002	34496	0	UG/L	1,1-Dichloroethane
200284	3S/12W-02R01S	02/14/2002	34501	0	UG/L	1,1-Dichloroethylene
200284	3S/12W-02R01S	02/14/2002	34506	0	UG/L	1,1,1-Trichloroethane
200284	3S/12W-02R01S	02/14/2002	34511	0	UG/L	1,1,2-Trichloroethane
200284	3S/12W-02R01S	02/14/2002	34516	0	UG/L	1,1,2,2-Tetrachloroethane
200284	3S/12W-02R01S	02/14/2002	34531	0	UG/L	1,2-Dichloroethane
200284	3S/12W-02R01S	02/14/2002	34536	0	UG/L	o-Dichlorobenzene (1,2-DCB)
200284	3S/12W-02R01S	02/14/2002	34541	0	UG/L	1,2-Dichloropropane
200284	3S/12W-02R01S	02/14/2002	34546	0	UG/L	trans-1,2-Dichloroethylene
200284	3S/12W-02R01S	02/14/2002	34551	0	UG/L	1,2,4-Trichlorobenzene
200284	3S/12W-02R01S	02/14/2002	34561	0	UG/L	1,3-Dichloropropene (Total)
200284	3S/12W-02R01S	02/14/2002	34566	0	UG/L	1,3-Dichlorobenzene
200284	3S/12W-02R01S	02/14/2002	34571	0	UG/L	p-Dichlorobenzene
200284	3S/12W-02R01S	02/14/2002	34576	0	UG/L	2-Chloroethyl Vinyl Ether
200284	3S/12W-02R01S	02/14/2002	34576	0	UG/L	2-Chloroethylvinylether
200284	3S/12W-02R01S	02/14/2002	34668	0	UG/L	Dichlorodifluoromethane
200284	3S/12W-02R01S	02/14/2002	34696	0	UG/L	Naphthalene
200284	3S/12W-02R01S	02/14/2002	39175	0	UG/L	Vinyl chloride (VC)
200284	3S/12W-02R01S	02/14/2002	39180	0	UG/L	Trichloroethylene (TCE)
200284	3S/12W-02R01S	02/14/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200284	3S/12W-02R01S	02/14/2002	71850	16	MG/L	Nitrate (as NO3)
200284	3S/12W-02R01S	02/14/2002	77035	0	UG/L	Tertiary Butyl Alcohol
200284	3S/12W-02R01S	02/14/2002	77093	0	UG/L	cis-1,2-Dichloroethylene
200284	3S/12W-02R01S	02/14/2002	77128	0	UG/L	Styrene
200284	3S/12W-02R01S	02/14/2002	77135	0	UG/L	o-Xylene
200284	3S/12W-02R01S	02/14/2002	77168	0	UG/L	1,1-Dichloropropene
200284	3S/12W-02R01S	02/14/2002	77170	0	UG/L	2,2-Dichloropropane
200284	3S/12W-02R01S	02/14/2002	77173	0	UG/L	1,3-Dichloropropane
200284	3S/12W-02R01S	02/14/2002	77222	0	UG/L	1,2,4-Trimethylbenzene
200284	3S/12W-02R01S	02/14/2002	77223	0	UG/L	Isopropylbenzene
200284	3S/12W-02R01S	02/14/2002	77224	0	UG/L	n-Propylbenzene
200284	3S/12W-02R01S	02/14/2002	77226	0	UG/L	1,3,5-Trimethylbenzene
200284	3S/12W-02R01S	02/14/2002	77350	0	UG/L	sec-Butylbenzene
200284	3S/12W-02R01S	02/14/2002	77353	0	UG/L	tert-Butylbenzene
200284	3S/12W-02R01S	02/14/2002	77562	0	UG/L	1,1,1,2-Tetrachloroethane
200284	3S/12W-02R01S	02/14/2002	77596	0	UG/L	Dibromomethane
200284	3S/12W-02R01S	02/14/2002	77613	0	UG/L	1,2,3-Trichlorobenzene
200284	3S/12W-02R01S	02/14/2002	81551	0	UG/L	Total Xylenes
200284	3S/12W-02R01S	02/14/2002	81555	0	UG/L	Bromobenzene
200284	3S/12W-02R01S	02/14/2002	81611	0	UG/L	Trichlorotrifluoroethane (Freon 113)
200284	3S/12W-02R01S	02/14/2002	82080	0	UG/L	Total Trihalomethanes
200284	3S/12W-02R01S	02/14/2002	A-008	0	UG/L	o-Chlorotoluene
200284	3S/12W-02R01S	02/14/2002	A-009	0	UG/L	p-Chlorotoluene
200284	3S/12W-02R01S	02/14/2002	A-010	0	UG/L	n-Butylbenzene
200284	3S/12W-02R01S	02/14/2002	A-011	0	UG/L	p-Isopropyltoluene
200284	3S/12W-02R01S	02/14/2002	A-012	0	UG/L	Bromochloromethane
200284	3S/12W-02R01S	02/14/2002	A-014	0	UG/L	m,p-Xylenes
200284	3S/12W-02R01S	02/14/2002	A-033	0	UG/L	Ethyl Tertiary Butyl Ether

200134	2S/12W-36M06S	06/17/2002	77562	0	UG/L	1,1,1,2-Tetrachloroethane
200134	2S/12W-36M06S	06/17/2002	77596	0	UG/L	Dibromomethane
200134	2S/12W-36M06S	06/17/2002	77613	0	UG/L	1,2,3-Trichlorobenzene
200134	2S/12W-36M06S	06/17/2002	78132	0	UG/L	P-Xylene
200134	2S/12W-36M06S	06/17/2002	81551	0	UG/L	Total Xylenes
200134	2S/12W-36M06S	06/17/2002	81555	0	UG/L	Bromobenzene
200134	2S/12W-36M06S	06/17/2002	81595	0	UG/L	2-Butanone (MEK)
200134	2S/12W-36M06S	06/17/2002	81596	0	UG/L	4-Methyl-2-Pentanone (MIBK)
200134	2S/12W-36M06S	06/17/2002	81611	0	UG/L	Trichlorotrifluoroethane (Freon 113)
200134	2S/12W-36M06S	06/17/2002	81710	0	UG/L	M-Xylene
200134	2S/12W-36M06S	06/17/2002	82080	0	UG/L	Total Trihalomethanes
200134	2S/12W-36M06S	06/17/2002	A-008	0	UG/L	o-Chlorotoluene
200134	2S/12W-36M06S	06/17/2002	A-009	0	UG/L	p-Chlorotoluene
200134	2S/12W-36M06S	06/17/2002	A-010	0	UG/L	n-Butylbenzene
200134	2S/12W-36M06S	06/17/2002	A-011	0	UG/L	p-Isopropyltoluene
200134	2S/12W-36M06S	06/17/2002	A-012	0	UG/L	Bromochloromethane
200134	2S/12W-36M06S	06/17/2002	A-014	0	UG/L	m,p-Xylenes
200134	2S/12W-36M06S	06/17/2002	A-033	0	UG/L	Ethyl Tertiary Butyl Ether
200134	2S/12W-36M06S	06/17/2002	A-034	0	UG/L	Tertiary Amyl Methyl Ether
200134	2S/12W-36M06S	06/17/2002	A-036	0	UG/L	Di-Isopropyl Ether
200235	3S/11W-06D03S	03/27/2002	01045	230	UG/L	Iron
200235	3S/11W-06D03S	06/26/2002	01045	200	UG/L	Iron
200282	3S/12W-02H04S	03/06/2002	00010	17.2	C	Temperature
200282	3S/12W-02H04S	03/06/2002	00095	820	US	Specific Conductance
200282	3S/12W-02H04S	03/06/2002	00403	7.6		Lab pH
200282	3S/12W-02H04S	03/06/2002	00410	170	MG/L	Alkalinity
200282	3S/12W-02H04S	03/06/2002	00620	0	UG/L	Nitrate as Nitrogen by IC
200282	3S/12W-02H04S	03/06/2002	00916	81	MG/L	Calcium
200282	3S/12W-02H04S	03/06/2002	01042	0	UG/L	Copper
200282	3S/12W-02H04S	03/06/2002	01051	0	UG/L	Lead
200282	3S/12W-02H04S	03/06/2002	01501	1.33	PCI/L	Alpha, Gross
200282	3S/12W-02H04S	03/06/2002	01501	1.33	PCI/L	Gross Alpha
200282	3S/12W-02H04S	03/06/2002	01502	1.22	PCI/L	Alpha, Two Sigma Error
200282	3S/12W-02H04S	03/06/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200282	3S/12W-02H04S	03/06/2002	71850	13	MG/L	Nitrate (as NO3)
200282	3S/12W-02H04S	05/15/2002	00010	16.7	C	Temperature
200282	3S/12W-02H04S	05/15/2002	00095	830	US	Specific Conductance
200282	3S/12W-02H04S	05/15/2002	00403	7.4		Lab pH
200282	3S/12W-02H04S	05/15/2002	00410	190	MG/L	Alkalinity
200282	3S/12W-02H04S	05/15/2002	00916	85	MG/L	Calcium
200282	3S/12W-02H04S	05/15/2002	01042	0	UG/L	Copper
200282	3S/12W-02H04S	05/15/2002	01051	0	UG/L	Lead
200282	3S/12W-02H04S	05/15/2002	01501	3.04	PCI/L	Alpha, Gross
200282	3S/12W-02H04S	05/15/2002	01501	3.04	PCI/L	Gross Alpha
200282	3S/12W-02H04S	05/15/2002	01502	1.85	PCI/L	Alpha, Two Sigma Error
200284	3S/12W-02R01S	01/08/2002	00612	0	MG/L	Ammonia Nitrogen
200284	3S/12W-02R01S	02/14/2002	32101	0	UG/L	Bromodichloromethane
200284	3S/12W-02R01S	02/14/2002	32102	0	UG/L	Carbon Tetrachloride
200284	3S/12W-02R01S	02/14/2002	32104	0	UG/L	Bromoform
200284	3S/12W-02R01S	02/14/2002	32105	0	UG/L	Chlorodibromomethane
200284	3S/12W-02R01S	02/14/2002	32106	0	UG/L	Chloroform (Trichloromethane)
200284	3S/12W-02R01S	02/14/2002	34010	0	UG/L	Toluene
200284	3S/12W-02R01S	02/14/2002	34030	0	UG/L	Benzene
200284	3S/12W-02R01S	02/14/2002	34301	0	UG/L	Chlorobenzene
00284	3S/12W-02R01S	02/14/2002	34311	0	UG/L	Chloroethane

200284	3S/12W-02R01S	02/14/2002	A-034	0	UG/L	Tertiary Amyl Methyl Ether
200284	3S/12W-02R01S	05/02/2002	71850	16	MG/L	Nitrate (as NO3)
200284	3S/12W-02R01S	05/23/2002	01032	0	UG/L	Hexavalent Chromium (Cr VI)
200284	3S/12W-02R01S	08/07/2002	71850	16	MG/L	Nitrate (as NO3)
200319	3S/12W-12A02S	03/12/2002	32101	0	UG/L	Bromodichloromethane
200319	3S/12W-12A02S	03/12/2002	32102	0	UG/L	Carbon Tetrachloride
200319	3S/12W-12A02S	03/12/2002	32104	0	UG/L	Bromoform
200319	3S/12W-12A02S	03/12/2002	32105	0	UG/L	Chlorodibromomethane
200319	3S/12W-12A02S	03/12/2002	32106	0	UG/L	Chloroform (Trichloromethane)
200319	3S/12W-12A02S	03/12/2002	34010	0	UG/L	Toluene
200319	3S/12W-12A02S	03/12/2002	34030	0	UG/L	Benzene
200319	3S/12W-12A02S	03/12/2002	34301	0	UG/L	Chlorobenzene
200319	3S/12W-12A02S	03/12/2002	34311	0	UG/L	Chloroethane
200319	3S/12W-12A02S	03/12/2002	34371	0	UG/L	Ethyl Benzene
200319	3S/12W-12A02S	03/12/2002	34391	0	UG/L	Hexachlorobutadiene
200319	3S/12W-12A02S	03/12/2002	34413	0	UG/L	Bromomethane (Methyl Bromide)
200319	3S/12W-12A02S	03/12/2002	34418	0	UG/L	Chloromethane (Methyl Chloride)
200319	3S/12W-12A02S	03/12/2002	34423	0	UG/L	Methylene Chloride
200319	3S/12W-12A02S	03/12/2002	34475	0.85	UG/L	Tetrachloroethylene (PCE)
200319	3S/12W-12A02S	03/12/2002	34488	0	UG/L	Fluorotrichloromethane (Freon11)
200319	3S/12W-12A02S	03/12/2002	34496	1.6	UG/L	1,1-Dichloroethane
200319	3S/12W-12A02S	03/12/2002	34501	5.3	UG/L	1,1-Dichloroethylene
200319	3S/12W-12A02S	03/12/2002	34506	0.5	UG/L	1,1,1-Trichloroethane
200319	3S/12W-12A02S	03/12/2002	34511	0	UG/L	1,1,2-Trichloroethane
200319	3S/12W-12A02S	03/12/2002	34516	0	UG/L	1,1,2,2-Tetrachloroethane
200319	3S/12W-12A02S	03/12/2002	34531	0	UG/L	1,2-Dichloroethane
200319	3S/12W-12A02S	03/12/2002	34536	0	UG/L	o-Dichlorobenzene (1,2-DCB)
200319	3S/12W-12A02S	03/12/2002	34541	0	UG/L	1,2-Dichloropropane
200319	3S/12W-12A02S	03/12/2002	34546	0	UG/L	trans-1,2-Dichloroethylene
200319	3S/12W-12A02S	03/12/2002	34551	0	UG/L	1,2,4-Trichlorobenzene
200319	3S/12W-12A02S	03/12/2002	34561	0	UG/L	1,3-Dichloropropene (Total)
200319	3S/12W-12A02S	03/12/2002	34566	0	UG/L	1,3-Dichlorobenzene
200319	3S/12W-12A02S	03/12/2002	34571	0	UG/L	p-Dichlorobenzene
200319	3S/12W-12A02S	03/12/2002	34576	0	UG/L	2-Chloroethyl Vinyl Ether
200319	3S/12W-12A02S	03/12/2002	34576	0	UG/L	2-Chloroethylvinylether
200319	3S/12W-12A02S	03/12/2002	34668	0	UG/L	Dichlorodifluoromethane
200319	3S/12W-12A02S	03/12/2002	34696	0	UG/L	Naphthalene
200319	3S/12W-12A02S	03/12/2002	39175	0	UG/L	Vinyl chloride (VC)
200319	3S/12W-12A02S	03/12/2002	39180	0	UG/L	Trichloroethylene (TCE)
200319	3S/12W-12A02S	03/12/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200319	3S/12W-12A02S	03/12/2002	71850	21	MG/L	Nitrate (as NO3)
200319	3S/12W-12A02S	03/12/2002	77035	0	UG/L	Tertiary Butyl Alcohol
200319	3S/12W-12A02S	03/12/2002	77093	0	UG/L	cis-1,2-Dichloroethylene
200319	3S/12W-12A02S	03/12/2002	77128	0	UG/L	Styrene
200319	3S/12W-12A02S	03/12/2002	77135	0	UG/L	o-Xylene
200319	3S/12W-12A02S	03/12/2002	77168	0	UG/L	1,1-Dichloropropene
200319	3S/12W-12A02S	03/12/2002	77170	0	UG/L	2,2-Dichloropropane
200319	3S/12W-12A02S	03/12/2002	77173	0	UG/L	1,3-Dichloropropane
200319	3S/12W-12A02S	03/12/2002	77222	0	UG/L	1,2,4-Trimethylbenzene
200319	3S/12W-12A02S	03/12/2002	77223	0	UG/L	Isopropylbenzene
200319	3S/12W-12A02S	03/12/2002	77224	0	UG/L	n-Propylbenzene
200319	3S/12W-12A02S	03/12/2002	77226	0	UG/L	1,3,5-Trimethylbenzene
200319	3S/12W-12A02S	03/12/2002	77350	0	UG/L	sec-Butylbenzene
?00319	3S/12W-12A02S	03/12/2002	77353	0	UG/L	tert-Butylbenzene
.00319	3S/12W-12A02S	03/12/2002	77562	0	UG/L	1,1,1,2-Tetrachloroethane

200319	3S/12W-12A02S	03/12/2002	77596	0	UG/L	Dibromomethane
200319	3S/12W-12A02S	03/12/2002	77613	0	UG/L	1,2,3-Trichlorobenzene
200319	3S/12W-12A02S	03/12/2002	81551	0	UG/L	Total Xylenes
200319	3S/12W-12A02S	03/12/2002	81555	0	UG/L	Bromobenzene
200319	3S/12W-12A02S	03/12/2002	81611	0	UG/L	Trichlorotrifluoroethane (Freon 113)
200319	3S/12W-12A02S	03/12/2002	82080	0	UG/L	Total Trihalomethanes
200319	3S/12W-12A02S	03/12/2002	A-008	0	UG/L	o-Chlorotoluene
200319	3S/12W-12A02S	03/12/2002	A-009	0	UG/L	p-Chlorotoluene
200319	3S/12W-12A02S	03/12/2002	A-010	0	UG/L	n-Butylbenzene
200319	3S/12W-12A02S	03/12/2002	A-011	0	UG/L	p-Isopropyltoluene
200319	3S/12W-12A02S	03/12/2002	A-012	0	UG/L	Bromochloromethane
200319	3S/12W-12A02S	03/12/2002	A-014	0	UG/L	m,p-Xylenes
200319	3S/12W-12A02S	03/12/2002	A-033	0	UG/L	Ethyl Tertiary Butyl Ether
200319	3S/12W-12A02S	03/12/2002	A-034	0	UG/L	Tertiary Amyl Methyl Ether
200319	3S/12W-12A02S	05/29/2002	01032	0	UG/L	Hexavalent Chromium (Cr VI)
200319	3S/12W-12A02S	08/20/2002	32101	0	UG/L	Bromodichloromethane
200319	3S/12W-12A02S	08/20/2002	32102	0	UG/L	Carbon Tetrachloride
200319	3S/12W-12A02S	08/20/2002	32104	0	UG/L	Bromoform
200319	3S/12W-12A02S	08/20/2002	32105	0	UG/L	Chlorodibromomethane
200319	3S/12W-12A02S	08/20/2002	32106	0	UG/L	Chloroform (Trichloromethane)
200319	3S/12W-12A02S	08/20/2002	34010	0	UG/L	Toluene
200319	3S/12W-12A02S	08/20/2002	34030	0	UG/L	Benzene
200319	3S/12W-12A02S	08/20/2002	34301	0	UG/L	Chlorobenzene
200319	3S/12W-12A02S	08/20/2002	34311	0	UG/L	Chloroethane
200319	3S/12W-12A02S	08/20/2002	34371	0	UG/L	Ethyl Benzene
200319	3S/12W-12A02S	08/20/2002	34391	0	UG/L	Hexachlorobutadiene
200319	3S/12W-12A02S	08/20/2002	34413	0	UG/L	Bromomethane (Methyl Bromide)
200319	3S/12W-12A02S	08/20/2002	34418	0	UG/L	Chloromethane (Methyl Chloride)
200319	3S/12W-12A02S	08/20/2002	34423	0	UG/L	Methylene Chloride
200319	3S/12W-12A02S	08/20/2002	34475	0.81	UG/L	Tetrachloroethylene (PCE)
200319	3S/12W-12A02S	08/20/2002	34488	0	UG/L	Fluorotrichloromethane (Freon11)
200319	3S/12W-12A02S	08/20/2002	34496	0	UG/L	1,1-Dichloroethane
200319	3S/12W-12A02S	08/20/2002	34501	4.1	UG/L	1,1-Dichloroethylene
200319	3S/12W-12A02S	08/20/2002	34506	0	UG/L	1,1,1-Trichloroethane
200319	3S/12W-12A02S	08/20/2002	34511	0	UG/L	1,1,2-Trichloroethane
200319	3S/12W-12A02S	08/20/2002	34516	0	UG/L	1,1,2,2-Tetrachloroethane
200319	3S/12W-12A02S	08/20/2002	34531	0	UG/L	1,2-Dichloroethane
200319	3S/12W-12A02S	08/20/2002	34536	0	UG/L	o-Dichlorobenzene (1,2-DCB)
200319	3S/12W-12A02S	08/20/2002	34541	0	UG/L	1,2-Dichloropropane
200319	3S/12W-12A02S	08/20/2002	34546	0	UG/L	trans-1,2-Dichloroethylene
200319	3S/12W-12A02S	08/20/2002	34551	0	UG/L	1,2,4-Trichlorobenzene
200319	3S/12W-12A02S	08/20/2002	34561	0	UG/L	1,3-Dichloropropene (Total)
200319	3S/12W-12A02S	08/20/2002	34566	0	UG/L	1,3-Dichlorobenzene
200319	3S/12W-12A02S	08/20/2002	34571	0	UG/L	p-Dichlorobenzene
200319	3S/12W-12A02S	08/20/2002	34668	0	UG/L	Dichlorodifluoromethane
200319	3S/12W-12A02S	08/20/2002	34696	0	UG/L	Naphthalene
200319	3S/12W-12A02S	08/20/2002	39175	0	UG/L	Vinyl chloride (VC)
200319	3S/12W-12A02S	08/20/2002	39180	0	UG/L	Trichloroethylene (TCE)
200319	3S/12W-12A02S	08/20/2002	46491	0	UG/L	Methyl Tert Butyl Ether (MTBE)
200319	3S/12W-12A02S	08/20/2002	71850	21	MG/L	Nitrate (as NO3)
200319	3S/12W-12A02S	08/20/2002	77035	0	UG/L	Tertiary Butyl Alcohol
200319	3S/12W-12A02S	08/20/2002	77093	0	UG/L	cis-1,2-Dichloroethylene
200319	3S/12W-12A02S	08/20/2002	77128	0	UG/L	Styrene
200319	3S/12W-12A02S	08/20/2002	77135	0	UG/L	o-Xylene
200319	3S/12W-12A02S	08/20/2002	77168	0	UG/L	1,1-Dichloropropene

200319	3S/12W-12A02S	08/20/2002	77170	0	UG/L	2,2-Dichloropropane
200319	3S/12W-12A02S	08/20/2002	77173	0	UG/L	1,3-Dichloropropane
200319	3S/12W-12A02S	08/20/2002	77222	0	UG/L	1,2,4-Trimethylbenzene
200319	3S/12W-12A02S	08/20/2002	77223	0	UG/L	Isopropylbenzene
200319	3S/12W-12A02S	08/20/2002	77224	0	UG/L	n-Propylbenzene
200319	3S/12W-12A02S	08/20/2002	77226	0	UG/L	1,3,5-Trimethylbenzene
200319	3S/12W-12A02S	08/20/2002	77350	0	UG/L	sec-Butylbenzene
200319	3S/12W-12A02S	08/20/2002	77353	0	UG/L	tert-Butylbenzene
200319	3S/12W-12A02S	08/20/2002	77562	0	UG/L	1,1,1,2-Tetrachloroethane
200319	3S/12W-12A02S	08/20/2002	77596	0	UG/L	Dibromomethane
200319	3S/12W-12A02S	08/20/2002	77613	0	UG/L	1,2,3-Trichlorobenzene
200319	3S/12W-12A02S	08/20/2002	81551	0	UG/L	Total Xylenes
200319	3S/12W-12A02S	08/20/2002	81555	0	UG/L	Bromobenzene
200319	3S/12W-12A02S	08/20/2002	81611	0	UG/L	Trichlorotrifluoroethane (Freon 113)
200319	3S/12W-12A02S	08/20/2002	82080	0	UG/L	Total Trihalomethanes
200319	3S/12W-12A02S	08/20/2002	A-008	0	UG/L	o-Chlorotoluene
200319	3S/12W-12A02S	08/20/2002	A-009	0	UG/L	p-Chlorotoluene
200319	3S/12W-12A02S	08/20/2002	A-010	0	UG/L	n-Butylbenzene
200319	3S/12W-12A02S	08/20/2002	A-011	0	UG/L	p-Isopropyltoluene
200319	3S/12W-12A02S	08/20/2002	A-012	0	UG/L	Bromochloromethane
200319	3S/12W-12A02S	08/20/2002	A-014	0	UG/L	m,p-Xylenes
200319	3S/12W-12A02S	08/20/2002	A-033	0	UG/L	Ethyl Tertiary Butyl Ether
200319	3S/12W-12A02S	08/20/2002	A-034	0	UG/L	Tertiary Amyl Methyl Ether

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FAX COVER SHEET

TO: Sharon Wallan	FROM: Mr. Angel Quintero
COMPANY:	DATE: 9/5/2003
FAX NUMBER: 949-752-1307	TOTAL NO. OF PAGES INCLUDING COVER: 10
PHONE NUMBER:	SENDER'S FAX NUMBER: 562-699-3383
RE: Water Quality	SENDER'S PHONE NUMBER: 562-692-4282

☐ URGENT X FOR REVIEW ☐ PLEASE COMMENT X PLEASE REPLY

NOTES/COMMENTS:

CITY OF PICO RIVERA

WATER DIVISION

PUMPING PLANT DATA

PLANT ADDRESS	WELL NO.	YEAR DRILLED	GROUND ELEV. FT.	CASING	DEPTH	HORSE POWER	GPM	PUMP SETTING	RECORDATI NUMBER
8739 Gallatin Rd.	1	1950	183.44	18"	290-ft.	Elec. 100	3,000	100-ft.	2S/12W-12A1
	2	1956	186.00	18"	360-ft.	Natural Gas Waukesha 200 + Elec. 250	2,800	120-ft.	2S/12W-1250
8316 Washington Blvd.	3	1955	162.34	20"	586-ft.	Elec. 200	3,000	186-ft.	2S/12W-23B0
	4	1960	160.82	20"	600-ft.	Elec. 150	1,800	200-ft.	2S/12W-23B0
8305 Slauson Ave.	5	1970	147.07	18"	611-ft.	Elec. 200	1,500	145-ft.	2S/12W-26D0
8231 Elmont Ave.	6	1950	144.99	16"	492-ft.	Elec. 50	650	150-ft.	2S/12W-26E03
8523 Ceylon Ave.	7	1948	138.80	16"	302-ft.	Elec. 75	800	150-ft.	2S/12W-26Q01
9623 Telegraph Rd.	8	1968	140.73	16"	626-ft.	Elec. 50	500	220-ft.	2S/12W-35M0
9403 Myron/Passons Standby	9	1954	150.25	16"	514-ft.	Elec. 100	1,200	210-ft.	2S/12W-25M01
9429 Bermudez nop.	10	1934	152.69	14"	500-ft.	Elec. 150	1,500	140-ft.	2S/12W-25E13
9732 Lundahl	11	1948	156.40	16"	468-ft.	Elec. 150	3,000	170-ft.	2S/12W-25G02
	12	1952	152.05	18"	520-ft.	Waukesha Natural Gas 200 + Elec. 250	2,200	150-ft.	2S/12W-25GQ1

2/10

76-L-296 CE 307 6-70

PLEASE RETURN TO LOS ANGELES COUNTY ENGINEER LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET, MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

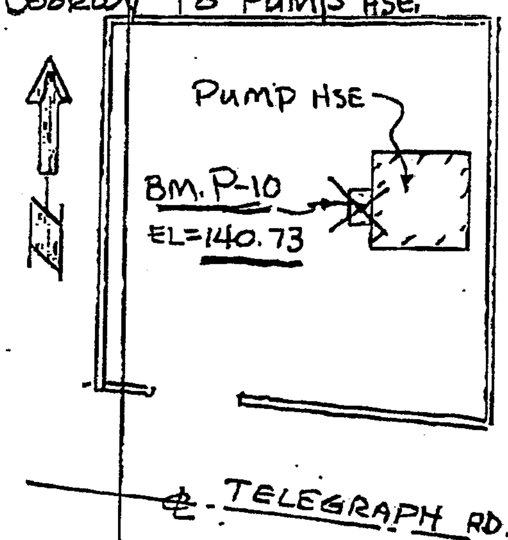
Do not extend notes this side of this line.

PUMP STA. NO. ~~10~~ 8

STATION	B. S.	H. I.	F. S.	ELEV.
BM.CY-1708				138.138
	5710	143848		
T.P.			5250	138598
	6630	145234		
BM P-10			4500	140734
	4315	145049		
T.P.			6455	138594
	5444	144038		
BM CY-1708			5.905	138133

CY-1708 EL=138.138 (BASELINE-1975) PER L.A. Co. RD. DEPT. - INT. OF TRUE AV. & TELEGRAPH RD. - L & BRAD IN cb. @ W. END cb. RET., SW. COR. - 47 FT. W. ℄ 15 FT S/O ℄ INT. TRUE AVE. & TELEGRAPH RD (SERVICE RD.)

BM P-10 EL= 140.73 SET CH "□" CTR. OF CONC. PAD @ DOORWY TO PUMP HSE.



CY-1708 EL= 138.138

Profile No. Notes Red Date Plotted Date

X-Sec. No. Notes Ck'd Date Checked Date

P.O. 15677

Job No. Division No.

Survey of Pump Plants 1 thru 10 B.M.'s

Survey by ... Notes J.S. Date 8-25-82

Map No. Indexed Date

F.B. - Pg. 11

10/10

76-L-298 CE 307 8-76

LOS ANGELES COUNTY ENGINEER

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	PUMP STA. NO. 8
BM CY-1593				142 613	CY-1593 EL= 142.613 (BASELINE-1975)
	4.991	147 604			PER L.A.Co. RD. DEPT. - S.W. COR. BIRCHBARK
T.P.			6 556	141.048	& TELEGRAPH RD. BM. NL. IN cb. - 4 FT.
	4.050	145.098			S/O B.CR. - 80' FT. S. & 13 FT W/O ℄ INT.
T.P.			4155	140943	
	4 339	145 282			
T.B.M. #5			4 434	140 848	TBM. # 5 EL = 140.85 TELEGRAPH
	4 265	145 113			RD. & ELMONT AV. L&T ON ℄ PROD.
T.P.			3.723	141 390	OF ELMONT AV. ON So. cb. OF
	5540	146 930			SERVICE ST.
T.P.			4606	142324	
	5000	147324			
T.B.M. #6			4445	142879	TBM. # 6 EL = 142.88 N.W. COR.
	5757	148636			FERNADEL AV. & MAXINE ST., L.A. Co.
					FLOOD CONT. TAG. IN cb. 5'± E. OF
T.P.			5 534	143102	W. END. cb. RET.
	6212	149314			
BM. P-8			4324	144990	B.M. P-8 EL.=144.99 Pump STA # 8
	3353	148343			SET CH "□" N.W. COR OF CONC. PAD
T.P.			5218	143125	TO PUMP HSE. (SEE SKETCH NEXT PG)
					6" FROM COR.

Profile No. ____ Notes Rcd. ____ Plotted ____ Job No. P.0.15677 Division No. ____ F.B. ____ Pg. 9

No. ____ Date ____ Date ____ Survey of [illegible] 1 THRU 10 B.M.'s

X-Sec. No. ____ Notes Chk'd ____ Checked ____ Survey by HNB/KU Notes J.B. Date 2-22-82

No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

3/10

US 50

PARK WATER COMPANY #8

PUMP & WELL DATA

Well No. 2-E 02S-12W-36-M06S

Address Anaheim & Telegraph - Pico Rivera

47-624-1732

Well Dimensions: Diameter 16" Depth 630'

Perforations: Top 227' - 290' Bottom 565' - 584'

Pump Data: Column 8" Diameter $2\frac{1}{2}$ x $1\frac{1}{2}$ Length 200'

220' Airline 10' x 8" Suction 7 x 12MB Bowls

DATE	STATIC LEVEL	PUMPING LEVEL	METER READING	REMARKS

CENTRAL BASIN PURVEYOR	WELL NAME	STATE WELL #	SAMPLE DATE	PERCHLORATE (µg/l)
PICO RIVERA, CITY OF	W1	02S/12W-12A01	08/25/99	<5
PICO RIVERA, CITY OF	W1	02S/12W-12A01	10/11/99	<5
PICO RIVERA, CITY OF	W1	02S/12W-12A01	05/08/00	<5
PICO RIVERA, CITY OF	W1	02S/12W-12A01	08/16/00	<5
PICO RIVERA, CITY OF	W11	02S/12W-25G02	08/25/99	<5
PICO RIVERA, CITY OF	W11	02S/12W-25G02	10/11/99	<5
PICO RIVERA, CITY OF	W11	02S/12W-25G02	01/31/00	<5
PICO RIVERA, CITY OF	W11	02S/12W-25G02	05/08/00	<5
PICO RIVERA, CITY OF	W12	02S/12W-25G01	08/25/99	<5
PICO RIVERA, CITY OF	W12	02S/12W-25G01	10/11/99	<5
PICO RIVERA, CITY OF	W12	02S/12W-25G01	01/31/00	<5
PICO RIVERA, CITY OF	W12	02S/12W-25G01	05/08/00	<5
PICO RIVERA, CITY OF	W2	02S/12W-12A05	08/25/99	<5
PICO RIVERA, CITY OF	W2	02S/12W-12A05	10/11/99	<5
PICO RIVERA, CITY OF	W2	02S/12W-12A05	01/31/00	<5
PICO RIVERA, CITY OF	W2	02S/12W-12A05	05/08/00	<5
PICO RIVERA, CITY OF	W3	02S/12W-23B04	08/25/99	<5
PICO RIVERA, CITY OF	W3	02S/12W-23B04	10/11/99	<5
PICO RIVERA, CITY OF	W3	02S/12W-23B04	01/31/00	<5
PICO RIVERA, CITY OF	W3	02S/12W-23B04	05/08/00	<5
PICO RIVERA, CITY OF	W4	02S/12W-23B08	08/25/99	<5
PICO RIVERA, CITY OF	W4	02S/12W-23B08	10/11/99	<5
PICO RIVERA, CITY OF	W4	02S/12W-23B08	01/31/00	<5
PICO RIVERA, CITY OF	W4	02S/12W-23B08	05/08/00	<5
PICO RIVERA, CITY OF	W5	02S/12W-26D07	08/25/99	<5
PICO RIVERA, CITY OF	W5	02S/12W-26D07	10/11/99	<5
PICO RIVERA, CITY OF	W6	02S/12W-26D07	01/31/00	<5
PICO RIVERA, CITY OF	W5	02S/12W-26D07	05/08/00	<5
PICO RIVERA, CITY OF	W6	02S/12W-26E03	08/25/99	<5
PICO RIVERA, CITY OF	W6	02S/12W-26E03	10/11/99	<5
PICO RIVERA, CITY OF	W6	02S/12W-26E03	01/31/00	<5
PICO RIVERA, CITY OF	W6	02S/12W-26E03	05/08/00	<5
PICO RIVERA, CITY OF	W7	02S/12W-26Q01	08/25/99	<5
PICO RIVERA, CITY OF	W7	02S/12W-26Q01	10/11/99	<5
PICO RIVERA, CITY OF	W7	02S/12W-26Q01	01/31/00	<5
PICO RIVERA, CITY OF	W7	02S/12W-26Q01	05/08/00	<5
PICO RIVERA, CITY OF	W8	02S/12W-36M06	08/25/99	<5
PICO RIVERA, CITY OF	W8	02S/12W-36M06	10/11/99	<5
PICO RIVERA, CITY OF	W8	02S/12W-36M06	01/31/00	<5
PICO RIVERA, CITY OF	W8	02S/12W-36M06	05/08/00	<5

SHADED WELL RESULTS CAN BE GRANDFATHERED - ALL HISTORIC DATA [illegible]

6110

CITY OF PICO RIVERA

WELL LOG

WELL NO. 10 W-1 NAME Telegraph ADDRESS 9623 Telegraph

DRILLED BY: Water Well Supply DATE: 1968 DIA: 16" 10 & 10

DEPTH: 630 Plugged to 627 PERFORATIONS: 277-290 565-584 5/16x 3 1/4 8 pe

0-20	Yellow sandy top soil
20-42	Brown sandy clay w/gravel
42-53	Blue clay
53-93	Yellow sand & gravel heave 5'
93-102	Yellow clay
102-162	Yellow clay w/sand & gravel heave
162-166	Yellow fine sand
166-185	Yellow sand & gravel heave 4 & 5'
185-191	Blue clay
191-232	Yellow clay w/sand & gravel
232-271	Yellow sand & gravel heave 3'
271-275	Yellow clay
275-290	Yellow sand & gravel heave 3'
290-392	Yellow clay w/pea gravel
392-406	Yellow sand & gravel dirty tight
406-423	Yellow sand & gravel w/clay
423-441	Yellow clay
441-458	Blue clay
458-483	Yellow clay
483-513	Yellow clay & small gravel
513-519	Yellow clay
519-525	Yellow gravel w/clay
525-531	Yellow sand & gravel
554-563	Yellow clay
563-584	Yellow sand & gravel
584-618	Yellow clay
618-630	Blue clay & cemented sand

WELL NO.	STATE NUMBER	PERFORATIONS
1	02S/12W-12A1	174' - 217' - 226' - 314'
2	02S/12W-12A05	176' - 284'
3	02S/12W-23B04	288' - 370' - 456' - 500' - 506' - 566'
4	02S/12W-23B08	281' - 292' - 298' - 320' - 470' - 572'
5	02S/12W-26D07	234' - 325' - 325' - 364'
6	02S/12W-26E03	382' - 422'
7	02S/12W-26Q01	221' - 223'
8	02S/12W-36M06	277' - 290' - 565' - 584'
9	02S/12W-25M01	424' - 468'
10	02S/12W-25E01	468' - 485'
11	02S/12W-25G02	451' - 462' - 406' - 422' - 313' - 354' - 250' - 272'
12	02S/12W-25G01	242' - 272' - 306' - 346' - 438' - 446'

8/10

CITY OF PICO RIVERA

WATER DIVISION

PUMPING PLANT DATA

'LANT ADDRESS	WELL NO.	YEAR DRILLED	GROUND ELEV. FT.	CASING	DEPTH	HORSE POWER	GPM	PUMP SETTING	RECORDA NUMBER
8739 Gallatin Rd.	1	1950	183.44	18"	290-ft.	Elec. 100	3,000	100-ft.	2S/12W-12A
	2	1956	186.00	18"	360-ft.	Natural Gas Waukesha 200 + Elec. 250	2,800	120-ft.	2S/12W-125
8316 Washington Blvd.	3	1955	162.34	20"	586-ft.	Elec. 200	3,000	186-ft.	2S/12W-23B0
	4	1960	160.82	20"	600-ft.	Elec. 150	1,800	200-ft.	2S/12W-23B0
8305 Slauson Ave.	5	1970	147.07	18"	611-ft.	Elec. 200	1,500	145-ft.	2S/12W-26D0
8231 Elmont Ave.	6	1950	144.99	16"	492-ft.	Elec. 50	650	150-ft.	2S/12W-26E03
8523 Ceylon Ave.	7	1948	138.80	16"	302-ft.	Elec. 75	800	150-ft.	2S/12W-26Q01
9623 Telegraph Rd.	8	1968	140.73	16"	626-ft.	Elec. 50	500	220-ft.	2S/12W-35M06
9403 Myron/Passons Standby	9	1954	150.25	16"	514-ft.	Elec. 100	1,200	210-ft.	2S/12W-25M01
9429 Bermudez nop.	10	1934	152.69	14"	500-ft.	Elec. 150	1,500	140-ft.	2S/12W-25E13S
9732 Lundahl	11	1948	156.40	16"	468-ft.	Elec. 150	3,000	170-ft.	2S/12W-25G02S
	12	1952	152.05	18"	520-ft.	Waukesha Natural Gas 200 + Elec. 250	2,200	150-ft.	2S/12W-25GQ1S

10/10

76-L-298 CE 207 8-70

PLEASE RETURN TO LOS ANGELES COUNTY ENGINEER
FOR LOS ANGELES COUNTY ENGINEERING BLDG

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	PUMP STA. NO. 8
BM CY-1593				142 613	CY-1593 EL= 142.613 (BASELINE-1975)
	4 991	147 604			PER L.A.Co. RD. DEPT. - S.W. COR. BIRCHBARK
T.P.			6 556	141 048	& TELEGRAPH RD. BM. NL. IN cb. - 4 FT.
	4 050	145.098			S/O B.CR. - 80' FT. S. & 13 FT W/O ℄ INT.
T.P.			4 155	140 943	
	4 339	145 282			
TBM. # 5			4 434	140 848	TBM. # 5 EL. = 140.85 TELEGRAPH
	4 265	145 113			RD. & ELMONT AV. L&T ON ℄ PROD.
T.P.			3.723	141 390	OF ELMONT AV. ON SO. cb. OF
	5540	146 930			SERVICE ST.
T.P.			4606	142 324	
	5000	147 324			
T.B.M # 6			4 445	142 879	TBM. # 6 EL= 142.88 N.W. COR.
	5757	148 636			FERNADEL AV. & MAXINE ST. L.A. Co.
T.P.			5 534	143 102	FLOOD CONT. TAG. IN cb. 5' ± E. OF W. END. cb. RET.
	6 212	149 314			
BM. P-8			4 324	144 990	B.M. P-8 EL. = 144.99 PUMP STA # 8
	3 353	148 343			SET CH "□" N.W. COR OF CONC. PAD
T.P.			5218	143 125	TO PUMP HSE. (SEE SKETCH NEXT PG) 6" FROM COR.

Profile ___ Notes Red ___ Plotted ___ Job No. ___ P.O. 15677
No. ___ Date ___ Date ___ Division No. ___
X-Sec. ___ Notes Chk'd ___ Checked ___ Survey of ___ 1 THRU 10 ___ B.M.'s
No. ___ Date ___ Date ___ Survey by HRS/M.4. Notes J.B. Date 2-22-82
Map No. ___ Indexed ___ Date ___
F.B. ___ Pg. 9

CITY WELL NO. 10 - 10100 HALEDON AVE

STATE NO. 2S/12W-35P01S

CITY OF DOWNEY

0 - 18	Top soil
18 - 31	Yellow clay
31 - 42	Yellow sand and clay balls
42 - 52	Blue clay
52 - 64	Blue sand and gravel
64 - 78	Yellow sand and gravel, tight
78 - 92	Yellow sand and gravel
92 - 118	Grey clay, hard
118 - 134	Yellow sand and gravel
134 - 180	Grey sandy clay
180 - 204	Yellow sandy clay
204 - 226	Yellow clay hard
226 - 239	Yellow clay and small gravel
239 - 280	Yellow sand and gravel
280 - 298	Yellow sand and small gravel, muddy
298 - 310	Yellow clay, small gravel
310 - 350	Yellow clay
350 - 378	Yellow clay and small gravel, hard
378 - 402	Yellow sand and gravel
402 - 412	Yellow clay and gravel
412 - 448	Yellow clay
448 - 453	Yellow sand and small gravel, tight
453 - 462	Yellow sand and gravel
462 - 532	Yellow sandy clay
532 - 544	Blue clay
544 - 570	Yellow clay
570 - 584	Yellow clay small gravel
584 - 594	Sand and small gravel with clay balls, muddy
594 - 644	Yellow clay
644 - 650	Blue clay

Perforation Record
380' to 403')
455' to 463') Cut with 3/8" x 3" Mills Knife, 8 cuts per circle, 1 circle
600' to 619') every 8"

Water level after perforating: 102'

TEST 10-28-52
1800 G.P.M. 30' PULL DOWN

10" SPARLING METER No. 24683 INST 11/20/52

1400 GMP - PUMPING RATE

W L

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UTILITIES DIVISION

Weck Laboratories, Inc.
Environmental and Analytical Services - Since 1964

EDT

Date of Report: 03/03/10

Sample ID No. 3022031-03

Laboratory Name:
Weck Laboratories, Inc

Signature Lab Director: ______________

Name of Sampler: John Igercic (C.O. Downey)

Date / time Sample collected:
03/02/19 0925

Date / Time Sample Received:
03/02/20 1511

Date Analyses Completed:
03/02/20

System name: DOWNEY - CITY, WATER DEPT.

System Number: 1910034

Name or number of Sample Source: WELL 10 (OLD PWC WELL 42C)

USER ID: 4TH

Station Number: 1910034-012

Laboratory code: 9588

Date / time Sample: | 03| 02 | 19 | 0925
YY MM DD TTTT

Date Analyses Completed: | 03| 02 | 20 |
YY MM DD

Submitted by: ______________________

Phone #: ______________________

Test Method	CHEMICAL	ENTRY #	ANALYSES RESULTS	MCL	DLR
	Thiobencarb (BOLERO)	A-001	ND	70	1.00
	Beryllium (ug/L)	01012	ND	4	1.000
	Mercury (Hg) (ug/L)	71900	ND	2	1.0
	Aluminum (Al) (ug/L)	01105	ND	1000	50.000
	Chromium (Total Cr) (ug/L)	01034	ND	50	10.000
	Manganese (Mn) (ug/L)	01055	ND	50	20.000
	Calcium (Ca) (mg/L)	00916	80.00		
	Nickel (ug/L)	01067	ND	100	10.000
	Copper (Cu) (ug/L)	01042	ND	1000	50.000
	Zinc (Zn) (ug/L)	01092	ND	5000	50.000
	Arsenic (As) (ug/L)	01002	2.10	50	2.000
	Selenium (Se) (ug/L)	01147	ND	50	5.000
	Iron (Fe) (ug/L)	01045	ND	300	100.000
	Potassium (K) (mg/L)	00937	4.30		
	Silver (Ag) (ug/L)	01077	ND	100	10.000
	Magnesium (Mg) (mg/L)	00927	17.00		
	Cadmium (Cd) (ug/L)	01027	ND	5	1.000
	Sodium (NA) (mg/L)	00929	62.00		
	Antimony (ug/L)	01097	ND	6	6.000
	Barium (Ba) (ug/L)	01007	ND	1000	100.000
	Thallium (ug/L)	01059	ND	2	1.000
	Lead (Pb) (ug/L)	01051	ND		5.000
	Agressiveness Index	82383	12.00		
	Apparent Color (Unfiltered) (Units)	00081	ND		
	PH (Laboratory) (Std.Units)	00403	7.40		

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Environmental and Analytical Services - Since 1964

)22031-03

Test Method	CHEMICAL ALL CHEMICALS REPORTED	ENTRY #	ANALYSES RESULTS	MCL	DLR
	Specific Conductance (E.C.) (umhos/cm)	00095	870.00	***	
	Odor Threshold at 60 C (TON)	00086	1.00		
	Total Alkalinity (AS CaCO3) (mg/L)	00410	180.00		
	Total Filterable Residue@180C(TDS)(mg/L)	70300	510.00	****	
	Total Hardness (as CaCO3) (mg/L)	00900	270.00		
	Lab Turbidity (NTU)	82079	0.13		
	Carbonate (CO3) (mg/L)	00445	ND		
	Bicarbonate (HCO3) (mg/L)	00440	220.00		
	Hydroxide (OH) (mg/L)	71830	ND		
	Nitrite as Nitrogen(N) (ug/L)	00620	ND	1000	400
	Fluoride (F) Temp. Depend. (mg/L)	00951	0.34	**	.100
	Chloride (Cl) (mg/L)	00940	86.00	*	
	Nitrate (as NO3) (mg/L)	71850	16.00	45	2.000
	Sulfate (SO4) (mg/L)	00945	130.00	*	.500
	MBAS (mg/L)	38260	ND	0.5	

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UTILITIES DIVISION

ANALYTICAL CHEMISTS

RADIO CHEMICAL ANALYSIS

Date of Report : December 30, 2002
Laboratory Name: **FGL Environmental**
Sampled On : 10/30/2002-10:15
Received On : 11/01/2002-09:30
Completed On : 12/24/2002

Sample ID : SP 211249-02

Lab Director :
Sampler : John Igercic
Employed By: City of Downey

EDT

System Name: DOWNEY - CITY, WATER DEPT. Number: 1910034

Name or Number of Sample Source: WELL 10 (OLD PWC WELL 42C)

User ID:4TH Station Number :1910034-012

Date/Time of Sample: 0 2 1 0 3 0 1 0 1 5
Y Y M M D D T T T T

Laboratory Code: 5 8 6 7

Submitted By: **FGL Environmental** Phone # (805)-659-0910

RADIOLOGICAL CHEMICALS

MCL	UNITS	CHEMICAL	ENTRY	RESULT	DLR
15 !!	pCi/L	Gross Alpha	01501	4.22	1
	pCi/L	Gross Alpha Counting Error	01502	± 2.09	
20	pCi/L	Uranium	28012	1.73	2
	pCi/L	Uranium Counting Error	A-028	± 0.480	
3	pCi/L	Total Radium 226	09501	0.0963	0.5
	pCi/L	Tot..Radium 226 Counting Error	09502	± 0.251	
2	pCi/L	Total Radium 228	11501	0.000	0.5
	pCi/L	Tot. Radium 228 Counting Error	11502	± 0.571	

!! Including Radium but excluding Uranium. (Ref. Title 22 sec. 64441.)
MCL - Maximum Contaminate Level, DLR - Detection Limit for Reporting Purposes, ND - Not Detected at/or above DLR
Composite of Gross Alpha also reported as sampled on

Corporate Offices & Laboratory
P.O. Box 272 / 853 Corporation Street
Santa Paula, CA 93061-0272
TEL: (805) 659-0910
FAX: (805) 525-4172
CA NELAP Certification No. 01110CA

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942-0181
FAX: (209) 942-0423
CA ELAP Certification No. 1563

Field Office
Visalia, California
TEL: (559) 734-9473
FAX: (559) 734-8435
Mobile: (559) 737-2399

ENVIRONI ENTAL

ANALYTICAL CHEMISTS

RADIO CHEMICAL ANALYSIS

Date of Report : November 18, 2002
Laboratory Name: **FGL Environmental**
Sampled On : 10/30/2002-10:15
Received On : 11/01/2002-09:30
Completed On : 11/08/2002

Sample ID : SP ~~211~~249-02
Lab Director :
Sampler : John Igercic
Employed By: City of Downey **EDT**

System Name: DOWNEY - CITY, WATER DEPT. Number: 1910034

Name or Number of Sample Source: WELL 10 (OLD PWC WELL 42C)

User ID:4TH Station Number :1910034-012

Date/Time of Sample: 0 2 1 0 3 0 1 0 1 5
Y Y M M D D T T T T

Laboratory Code: 5 8 6 7

Submitted By: **FGL Environmental** Phone # (805)-659-0910

RADIOLOGICAL CHEMICALS

MCL	UNITS	CHEMICAL	ENTRY	RESULT	DLR
15 !!	pCi/L	Gross Alpha	01501	4.22	1
	pCi/L	Gross Alpha Counting Error	01502	± 2.09	

!! Including Radium but excluding Uranium. (Ref. Title 22 sec. 64441.)
MCL - Maximum Contaminate Level, DLR - Detection Limit for Reporting Purposes, ND - Not Detected at/or above DLR

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CA NELAP Certification No. [illegible]

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942-0181
FAX: (209) 942-0423

Field Office
Visalia, California
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FAX: (559) 734-8435
Mobile: (559) 737-2399

EDT

... Laboratories, Inc.
14859 E. Clark Avenue
City of Industry, CA 91745
GENERAL MINERAL & PHYSICAL & INORGANIC ANALYSIS (9/99)

ate of Report: 02/12/03 — Sample ID No.2103019-02
aboratory — Signature Lab
a : WECK LABORATORIES — Director:
a of Sampler:John Igercic — Employed By: City of Downey
ate/Time Sample ollected:02/10/30/1015 — Date/Time Sample Received @ Lab:02/10/30/1542 — Date Analyses Completed:02/11/27

==

ystem ame:DOWNEY - CITY, WATER DEPT. — System Number: 1910034
ame or Number of Sample Source:WELL 10 (OLD PWC WELL 42C)

****

User ID: 4TH — Station Number: 1910034-012 *
Date/Time of Sample: |02|10|30|1015| — Laboratory Code: 9588 *
YY MM DD TTTT — YY MM DD *
Date Analysis completed: |02|11|27| *
Submitted by:____________ Phone #:____________ *

****

GE 1 OF 1 — INORGANIC CHEMICALS

MCL	REPORTING UNITS	CHEMICAL	ENTRY #	ANALYSES RESULTS	DLR
	ug/L	Chromium (Total Cr-CrVI screen) (ug/L)	A-044	ND	1.0

+ Indicates Secondary Drinking Water Standards

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UTILITIES DIVISION

Weck Laboratories, Inc.

Environmental and Analytical Services - Since 1964

Report Date: Monday, December 2, 2002
Received Date: Wednesday, October 30, 2002
Received Time: 3:42 pm

Turnaround Time: Normal

Client: Central Basin Municipal Water District
17140 S. Avalon Blvd., Suite 210
Carson, CA 90746-1218

Phone: (310) 660-6246
FAX: (310) 217-2414

Attn: Cheryl Ross

Project: City of Downey

P.O.#:

Certificate of Analysis

rk Order No: 2103019-02 **Sample ID: Well 10** **Matrix: Water**

npled By: John Igercic **Sampled: 30-Oct-02 10:15** **Sample Note:**

alyte	Result	Qualifiers	Units	Dilution	Reporting Limit	Method	Prepared	Analyzed		Batch
PA	ND		ug/l	1	1.0	EPA 515.3	07-Nov-02	15-Nov-02	em	W211207
·ogate: 2,4-DCAA			*74.0 %*		*70-130*	*EPA 515.3*	*07-Nov-02*	*15-Nov-02*	*em*	*W211207*
thyl tert-butyl ether	ND		ug/l	1	3.0	EPA 524.2	05-Nov-02	05-Nov-02	an	W211243
·obenzene	ND		ug/l	1	10	EPA 524.2	05-Nov-02	05-Nov-02	an	W211243
·: 1,2-Dichlorobenzene-d4			*108 %*		*70-130*	*EPA 524.2*	*05-Nov-02*	*05-Nov-02*	*an*	*W211243*
: 4-Bromofluorobenzene			*91.0 %*		*70-130*	*EPA 524.2*	*05-Nov-02*	*05-Nov-02*	*an*	*W211243*
Dinitrotoluene	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
Dinitrotoluene	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
tochlor	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
›acil	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
-DDE	ND		ug/l	1	0.80	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
'C	ND		ug/l	1	1.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
inate	ND		ug/l	1	0.90	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
›gate: 1,3-Dimethyl-2-nitrobenzene			*108 %*		*70-130*	*EPA 525.2*	*05-Nov-02*	*13-Nov-02*	*BN*	*W211087*
›gate: Perylene-d12			*90.4 %*		*70-130*	*EPA 525.2*	*05-Nov-02*	*13-Nov-02*	*BN*	*W211087*
›gate: Triphenyl phosphate			*110 %*		*70-130*	*EPA 525.2*	*05-Nov-02*	*13-Nov-02*	*BN*	*W211087*
l Chromium	ND		ug/l	1	1.0	EPA 200.8	27-Nov-02	27-Nov-02	at	W211689
s Alpha	4.22		pCi/L	1		Subcontract	08-Nov-02	08-Nov-02	tn	W211581
s Alpha counting error (+/-)	2.09		pCi/L	1		Subcontract	08-Nov-02	08-Nov-02	tn	W211581
ılorate	ND		ug/l	1	4.0	EPA 314.0	13-Nov-02	14-Nov-02	hp	W211340

:e Narrative:

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UTILITIES DIVISION

14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634

Weck Laboratories, Inc. EDT
14859 E. Clark Avenue
City of Industry, CA 91745 9-23-02
ORGANIC CHEMICAL ANALYSIS (9/99)

te of Report: 02/09/18 Sample ID No.A205185-001
boratory Signature Lab
r WECK LABORATORIES Director: ______
1. of Sampler:John Igercic Employed By: City of Downey
te/Time Sample Date/Time Sample Date Analyses
llected:02/08/19/0720 Received @ Lab:02/08/19/1509 Completed:02/09/05

==

stem System
ne:DOWNEY - CITY, WATER DEPT. Number: 1910034
ne or Number of Sample Source:WELL 10 (OLD PWC WELL 42C)

****

User ID: 4TH Station Number: 02S/12W-35P01 S *
Date/Time of Sample: |02|08|19|0720| Laboratory Code: 9588 *
YY MM DD TTTT YY MM DD *
Date Analysis completed: |02|09|05| *
Submitted by:______ Phone #:______ *

****

 REGULATED ORGANIC CHEMICALS

TEST ETHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
24.2	Bromodichloromethane	32101	ND		.50
24.2	Bromoform	32104	1.2		.50
24.2	Chloroform (Trichloromethane)	32106	ND		.50
24.2	Dibromochloromethane	32105	ND		.50
2	Total Trihalomethanes (THM'S/ TTHM)	82080	1.2	100	.50
24.2	Benzene	34030	ND	1	.50
24.2	Carbon Tetrachloride	32102	ND	.5	.50
24.2	1,2-Dichlorobenzene (o-DCB)	34536	ND	600	.50
24.2	1,4-Dichlorobenzene (p-DCB)	34571	ND	5	.50
24.2	1,1-Dichloroethane (1,1-DCA)	34496	ND	5	.50
24.2	1,2-Dichloroethane (1,2-DCA)	34531	ND	.5	.50
24.2	1,1-Dichloroethylene (1,1-DCE)	34501	ND	6	.50
4.2	cis-1,2-Dichloroethylene (c-1,2-DCE)	77093	ND	6	.50
4.2	trans-1,2-Dichloroethylene (t-1,2-DCE)	34546	ND	10	.50
4.2	Dichloromethane (Methylene Chloride)	34423	ND	5	.50
4.2	1,2-Dichloropropane	34541	ND	5	.50
4.2	Total 1,3-Dichloropropene	34561	ND	.5	.50
4.2	Ethyl Benzene	34371	ND	700	.50
4.2	Methyl tert-Butyl Ether(MTBE)	46491	ND	5	3.00
4.2	Monochlorobenzene (Chlorobenzene)	34301	ND	70	.50
4.2	Styrene	77128	ND	100	.50
4.2	1,1,2,2-Tetrachloroethane	34516	ND	1	.50
4.2	Tetrachloroethylene (PCE)	34475	ND	5	.50
4.2	Toluene	34010	ND	150	.50
4.2	1,2,4-Trichlorobenzene	34551	ND	70	.50
4.2	1,1,1-Trichloroethane (1,1,1-TCA)	34506	ND	200	.50
	1,1,2-Trichloroethane (1,1,2-TCA)	34511	ND	5	.50
	Trichloroethylene (TCE)	39180	ND	5	.50
.2	Trichlorofluoromethane (FREON 11)	34488	ND	150	5.00

 REGULATED ORGANIC CHEMICALS CONTINUED A205185-001

TEST THOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	Trichlorotrifluoroethane (FREON 113)	81611	ND	1200	10.00
524.2	Vinyl Chloride (VC)	39175	ND	.5	.50
524.2	m-Xylene	81710	ND		.50
524.2	m,p-Xylene	A-014	ND		.50
524.2	o-Xylene	77135	ND		.50
524.2	p-Xylene	78132	ND		.50
524.2	Total Xylenes (m,p, & o)	81551	ND	1750	.50
504.1	Dibromochloropropane (DBCP)	38761	ND	.2	.01
504.1	Ethylene Dibromide (EDB)	77651	ND	.05	.02
508	Endrin	39390	ND	2	.10
508	Lindane (gamma-BHC)	39340	ND	.2	.20
508	Methoxychlor	39480	ND	40	10.00
508	Toxaphene	39400	ND	3	1.00
508	Chlordane	39350	ND	.1	.10
525.2	Diethylhexylphthalate (DEHP)	39100	ND	4	3.00
508	Heptachlor	39410	ND	.01	.01
508	Heptachlor epoxide	39420	ND	.01	.01
507	Atrazine (AATREX)	39033	ND	3	1.00
507	Molinate (ORDRAM)	82199	ND	20	2.00
507	Simazine (PRINCEP)	39055	ND	4	1.00
507	Thiobencarb (BOLERO)	A-001	ND	70	1.00
7	Alachlor (ALANEX)	77825	ND	2	1.00
15.3	Bentazon (BASAGRAN)	38710	ND	18	2.00
25.2	Benzo(a)pyrene	34247	ND	.2	0.10
15.3	2,4-D	39730	ND	70	10.00
15.3	2,4,5-TP (SILVEX)	39045	ND	50	1.00
15.3	Carbofuran (FURADAN)	81405	ND	18	5.00
15.3	Dalapon	38432	ND	200	10.00
15.3	Dinoseb (DNBP)	81287	ND	7	2.00
49.2	Diquat	78885	ND	20	4.00
25.2	Di(2-ethylhexyl) Adipate	A-026	ND	400	5.00
48.1	Endothall	38926	ND	100	45.00
547	Glyphosate	79743	ND	700	25.00
508	Hexachlorobenzene	39700	ND	1	.50
508	Hexachlorocyclopentadiene	34386	ND	50	1.00
15.3	Oxamyl (Vydate)	38865	ND	200	20.00
15.3	Pentachlorophenol (PCP)	39032	ND	1	.20
15.3	Picloram	39720	ND	500	1.00
508	Polychlorinated Biphenyls (Total PCB's)	39516	ND	.5	.50

UNREGULATED ORGANIC CHEMICALS

24.2	tert-Amyl Methyl Ether (TAME)	A-034	ND		3.00
24.2	Bromobenzene	81555	ND		.50
2	Bromochloromethane	A-012	ND		.50
2	Bromomethane (Methyl Bromide)	34413	ND		.50
24.2	n-Butylbenzene	A-010	ND		.50
24.2	sec-Butylbenzene	77350	ND		.50

TEST IOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	tert-Butylbenzene	77353	ND		.50
524.2	Chloroethane	34311	ND		.50
524.2	2-Chloroethylvinyl Ether	34576	ND		1.00
524.2	Chloromethane (Methyl Chloride)	34418	ND		.50
524.2	2-Chlorotoluene	A-008	ND		.50
524.2	4-Chlorotoluene	A-009	ND		.50
524.2	Dibromomethane	77596	ND		.50
524.2	1,3-Dichlorobenzene (m-DCB)	34566	ND		.50
524.2	Dichlorodifluoromethane	34668	ND		0.50
24.2	1,3-Dichloropropane	77173	ND		.50
24.2	2,2-Dichloropropane	77170	ND		.50
24.2	1,1-Dichloropropene	77168	ND		.50
24.2	Diisopropyl Ether (DIPE)	A-036	ND		3.00
24.2	Ethyl tert-Butyl Ether (ETBE)	A-033	ND		3.00
24.2	Hexachlorobutadiene	34391	ND		.50
24.2	Isopropylbenzene (Cumene)	77223	ND		.50
24.2	p-Isopropyltoluene	A-011	ND		.50
4.2	Naphthalene	34696	ND		.50
24.2	n-Propylbenzene	77224	ND		.50
24.2	1,1,1,2-Tetrachloroethane	77562	ND		.50
24.2	1,2,3-Trichlorobenzene	77613	ND		.50
[illegible] 1	1,2,3-Trichloropropane	77443	ND		.005
[illegible] 2	1,2,4-Trimethylbenzene	77222	ND		.50
24.2	1,3,5-Trimethylbenzene	77226	ND		.50
24.2	Methyl Ethyl Ketone (MEK, Butanone)	81595	ND		5.00
24.2	Methyl Isobutyl Ketone (MIBK)	81596	ND		5.00
1.1	Aldicarb (TEMIK)	39053	ND		3.00
1.1	Aldicarb Sulfone	A-020	ND		4.00
1.1	Aldicarb Sulfoxide	A-019	ND		3.00
508	Aldrin	39330	ND		.075
507	Bromacil (HYVAR)	82198	ND		10.00
507	Butachlor	77860	ND		.38
1.1	Carbaryl (Sevin)	77700	ND		5.00
508	Chlorothalonil (DACONIL, BRAVO)	70314	ND		5.00
507	Diazinon	39570	ND		.25
5.3	Dicamba (BANVEL)	82052	ND		1.50
508	Dieldrin	39380	ND		.02
507	Dimethoate (CYGON)	38458	ND		10.00
1.1	3-Hydroxycarbofuran	A-021	ND		3.00
1.1	Methomyl	39051	ND		2.00
507	Metolachlor	39356	ND		
507	Metribuzin	81408	ND		
507	Prometryn (CAPAROL)	39057	ND		2.00
508	Propachlor	38533	ND		.50

boratory comments and description of any additional components found:

w Levels of Bromoform have been detected in the preservative contained in the

als.

ENVIRONI .ENTAL

9-23-02

ANALYTICAL CHEMISTS

RADIO CHEMICAL ANALYSIS

Date of Report : September 17, 2002
Laboratory Name: **FGL Environmental**
Sampled On : 08/19/2002-07:20
Received On : 08/23/2002-12:45
Completed On : 09/09/2002

Sample ID : SP 208633-01

Lab Director :
Sampler : John Igercic
Employed By : **EDT**

System Name: DOWNEY - CITY, WATER DEPT. Number: 1910034

Name or Number of Sample Source: WELL 10 (OLD PWC WELL 42C)

User ID:4TH Station Number :02S/12W-35P01 S

Date/Time of Sample: 0 2 0 8 1 9 0 7 2 0
Y Y M M D D T T T T

Laboratory Code: 5 8 6 7

Submitted By: **FGL Environmental** Phone # (805)-659-0910

RADIOLOGICAL CHEMICALS

MCL	UNITS	CHEMICAL	ENTRY	RESULT	DLR
15 !!	pCi/L	Gross Alpha	01501	2.20	1
	pCi/L	Gross Alpha Counting Error	01502	± 1.57	

!! Including Radium but excluding Uranium. (Ref. Title 22 sec. 64441.)

MCL - Maximum Contaminate Level, DLR - Detection Limit for Reporting Purposes, ND - Not Detected at/or above DLR

Corporate Offices & Laboratory
P.O. Box 272 / 853 Corporation Street
Santa Paula, CA 93061-0272
TEL: (805) 659-0910

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942-0181

Field Office
Visalia, California
TEL: (559) 734-9473

9-23-02

ORGANIC CHEMICAL ANALYSIS (02/01)

Date of Report: 02/09/16

Sample Id No.: G2H220303001

Laboratory Name: STL Sacramento

Signature Lab Director: [signature] for ERIC REDMAN

Name of Sampler: JOHN IGERCIC

Employed by: CITY OF DOWNEY

Date/Time Sample Collected: 02/08/19 07:20

Date/Time Sample Received @ Lab: 02/08/22 09:00

Date Analysis Completed: 02/09/08

System Name: DOWNEY - CITY, WATER DEPT.

System Number: 1910034

Name or Number of Sample Source: WELL 10 (OLD PWC WELL 42C)

User ID: 4TH

Station Number: 02S/12W-35P01 S

Date/Time of Sample: |02|08|19|0720
YYMMDDTTTT

Laboratory Code: 0006

Date Analyses completed: |02|09|08|
YYMMDD

Submitted by:

Phone #:

REGULATED ORGANIC CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICAL REPORTED uG/L	ENTRY #	ANALYSIS RESULTS	MCL uG/L	DLR uG/L
1613B	2,3,7,8-TCDD	34676	ND	3E-5	5E-6

9-23-02

Weck Laboratories, Inc.

Environmental and Analytical Services - Since 1964

Report Date: *Friday, September 20, 2002*
Received Date: *Monday, August 19, 2002*
Log By: mq
Log Time: 15:09

Client: Central Basin Municipal Water District
17140 S. Avalon Blvd., Suite 210
Carson, CA 90746-1218

Phone: (310) 660-6246
FAX: (310) 217-2414

Attn.: Cheryl Ross

Project: City of Downey

P.O. #: Agreement B1187
Turnaround Time: Normal

CERTIFICATE OF ANALYSIS

Lab#: A205185-001 **Sample ID:** Well 10 **Matrix:** Ground Water
Sampled By: John Igercic **Date:** 8/19/2002 **Time:** 7:20

Parameter	Result	Flag	Units	Dilution Factor	RL	Method	Analyzed		Worksheet #
Dichlorodifluoromethane	ND		ug/L	1	0.5	EPA 524.2	8/20/2002	an	WS36252
Chloromethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Vinyl chloride	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
momethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
roethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
richlorofluoromethane (Freon 11)	ND		ug/L	1	5.0	EPA 524.2	8/20/2002	an	WS36252
Trichlorotrifluoroethane (Freon 113)	ND		ug/L	1	10	EPA 524.2	8/20/2002	an	WS36252
1,1-Dichloroethene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Methylene chloride (Dichloromethane)	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
trans-1,2-Dichloroethene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Methyl tert-Butyl Ether	ND		ug/L	1	3.0	EPA 524.2	8/20/2002	an	WS36252
1,1-Dichloroethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
2-Butanone (Methyl ethyl ketone)	ND		ug/L	1	5.0	EPA 524.2	8/20/2002	an	WS36252
2,2-Dichloropropane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
cis-1,2-Dichloroethene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Bromochloromethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Chloroform	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,1,1-Trichloroethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Carbon tetrachloride	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,1-Dichloropropene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Benzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2-Dichloroethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Trichloroethene (TCE)	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2-Dichloropropane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Dibromomethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Bromodichloromethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
cis-1,3-Dichloropropene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
4-Methyl-2-pentanone (MiBK)	ND		ug/L	1	5.0	EPA 524.2	8/20/2002	an	WS36252
2-Chloroethylvinyl ether	ND		ug/L	1	1.0	EPA 524.2	8/20/2002	an	WS36252
Toluene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
s-1,3-Dichloropropene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
-Trichloroethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252

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www.wecklabs.com

nt: Central Basin Municipal Water District
, ,oject Name: City of Downey

Report Date: *Friday, September 20, 2002*

CERTIFICATE OF ANALYSIS

Lab#: A205185-001 **Sample ID:** Well 10 **Matrix:** Ground Water
Sampled By: John Igercic **Date:** 8/19/2002 **Time:** 7:20

Parameter	Result	Flag	Units	Dilution Factor	RL	Method	Analyzed		Worksheet #
Tetrachloroethene (PCE)	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,3-Dichloropropane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Dibromochloromethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2-Dibromoethane (EDB)	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Chlorobenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Ethyl benzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
m/p-Xylenes	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
o-Xylene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Styrene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Bromoform	1.2		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Isopropylbenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Bromobenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,1,2,2-Tetrachloroethane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2,3-Trichloropropane	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
n-Propyl benzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
2-Chlorotoluene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
`hlorotoluene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
,-Trimethylbenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
tert-Butyl benzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2,4-Trimethylbenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
sec-Butylbenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,3-Dichlorobenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
4-isopropyltoluene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,4-Dichlorobenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2-Dichlorobenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
n-Butylbenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2-Dibromo-3-chloropropane (DBCP)	ND		ug/L	1	1.0	EPA 524.2	8/20/2002	an	WS36252
1,2,4-Trichlorobenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Hexachlorobutadiene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Naphthalene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
1,2,3-Trichlorobenzene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Total 1,3-Dichloropropene	ND		ug/L	1	0.50	EPA 524.2	8/20/2002	an	WS36252
Tert-amyl Methyl Ether	ND		ug/L	1	3.0	EPA 524.2	8/20/2002	an	WS36252
Ethyl tert-Butyl Ether	ND		ug/L	1	3.0	EPA 524.2	8/20/2002	an	WS36252
1,1,1,2-Tetrachloroethane	ND		ug/L	1	0.5	EPA 524.2	8/20/2002	an	WS36252
Di-isopropyl ether	ND		ug/L	1	3.0	EPA 524.2	8/20/2002	an	WS36252
Prep. EPA 504.1 Date: 8/19/2002	***By kk***								
1,2-Dibromoethane (EDB)	ND		ug/L	1	0.020	EPA 504.1	8/19/2002	kk,fv	WS36197
1,2-Dibromo-3-chloropropane (DBCP)	ND		ug/L	1	0.010	EPA 504.1	8/19/2002	kk,fv	WS36197
1,2,3-Trichloropropane	ND		ug/L	1	0.050	EPA 504.1	8/19/2002	kk,fv	WS36197
Prep. EPA 549.2 Date: 8/23/2002	***By aj***								
)inuat	ND		ug/L	1	4.0	EPA 549.2	9/3/2002	dc	WS36310

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www.wecklabs.com

it: Central Basin Municipal Water District
Project Name: City of Downey

Report Date: *Friday, September 20, 2002*

CERTIFICATE OF ANALYSIS

Lab#: A205185-001 **Sample ID:** Well 10 **Matrix:** Ground Water
Sampled By: John Igercic **Date:** 8/19/2002 **Time:** 7:20

Parameter	Result	Flag	Units	Dilution Factor	RL	Method	Analyzed		Worksheet #
Prep. EPA 515.3 Date: 8/27/2002	*By jl*								
Dalapon	ND		ug/L	1	0.50	EPA 515.3	8/30/2002	fv	WS36348
3,5-Dichlorobenzoic acid	ND		ug/L	1	1.0	EPA 515.3	8/30/2002	fv	WS36348
Dicamba	ND		ug/L	1	0.60	EPA 515.3	8/30/2002	fv	WS36348
Dichloroprop	ND		ug/L	1	0.30	EPA 515.3	8/30/2002	fv	WS36348
2,4-D	ND		ug/L	1	0.50	EPA 515.3	8/30/2002	fv	WS36348
Pentachlorophenol	ND		ug/L	1	0.20	EPA 515.3	8/30/2002	fv	WS36348
2,4,5-TP (Silvex)	ND		ug/L	1	0.20	EPA 515.3	8/30/2002	fv	WS36348
2,4,5-T	ND		ug/L	1	0.20	EPA 515.3	8/30/2002	fv	WS36348
2,4-DB	ND		ug/L	1	2.0	EPA 515.3	8/30/2002	fv	WS36348
Dinoseb	ND		ug/L	1	0.50	EPA 515.3	8/30/2002	fv	WS36348
Bentazon	ND		ug/L	1	2.0	EPA 515.3	8/30/2002	fv	WS36348
Dacthal (DCPA)	ND		ug/L	1	0.10	EPA 515.3	8/30/2002	fv	WS36348
Picloram	ND		ug/L	1	1.0	EPA 515.3	8/30/2002	fv	WS36348
Acifluorfen	ND		ug/L	1	0.50	EPA 515.3	8/30/2002	fv	WS36348
). EPA 507 Date: 8/26/2002	*By jl*								
Alachlor	ND		ug/L	1	1.0	EPA 507	9/3/2002	fv	WS36316
Atrazine	ND		ug/L	1	1.0	EPA 507	9/3/2002	fv	WS36316
Bromacil	ND		ug/L	1	10	EPA 507	9/3/2002	fv	WS36316
Butachlor	ND		ug/L	1	0.38	EPA 507	9/3/2002	fv	WS36316
Diazinon	ND		ug/L	1	0.25	EPA 507	9/3/2002	fv	WS36316
Dimethoate	ND		ug/L	1	10	EPA 507	9/3/2002	fv	WS36316
Molinate	ND		ug/L	1	2.0	EPA 507	9/3/2002	fv	WS36316
Prometryn	ND		ug/L	1	2.0	EPA 507	9/3/2002	fv	WS36316
Simazine	ND		ug/L	1	1.0	EPA 507	9/3/2002	fv	WS36316
Thiobencarb	ND		ug/L	1	1.0	EPA 507	9/3/2002	fv	WS36316
Metolachlor	ND		ug/L	1	0.50	EPA 507	9/3/2002	fv	WS36316
Metribuzin	ND		ug/L	1	0.50	EPA 507	9/3/2002	fv	WS36316
Prometon	ND		ug/L	1	1.0	EPA 507	9/3/2002	fv	WS36316
Prep. EPA 508 Date: 8/23/2002	*By jl*								
Aldrin	ND		ug/L	1	0.075	EPA 508	9/5/2002	fv	WS36281
alpha-BHC	ND		ug/L	1	0.050	EPA 508	9/5/2002	fv	WS36281
beta-BHC	ND		ug/L	1	0.050	EPA 508	9/5/2002	fv	WS36281
delta-BHC	ND		ug/L	1	0.50	EPA 508	9/5/2002	fv	WS36281
gamma-BHC (lindane)	ND		ug/L	1	0.20	EPA 508	9/5/2002	fv	WS36281
4,4'-DDD	ND		ug/L	1	0.020	EPA 508	9/5/2002	fv	WS36281
4,4'-DDE	ND		ug/L	1	0.010	EPA 508	9/5/2002	fv	WS36281
4,4'-DDT	ND		ug/L	1	0.020	EPA 508	9/5/2002	fv	WS36281
Dieldrin	ND		ug/L	1	0.020	EPA 508	9/5/2002	fv	WS36281
Endosulfan I	ND		ug/L	1	0.020	EPA 508	9/5/2002	fv	WS36281
Endosulfan II	ND		ug/L	1	0.010	EPA 508	9/5/2002	fv	WS36281
)sulfan sulfate	ND		ug/L	1	0.050	EPA 508	9/5/2002	fv	WS36281

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ıt: Central Basin Municipal Water District | Report Date: *Friday, September 20, 2002*
. . ɔject Name: City of Downey

CERTIFICATE OF ANALYSIS

Lab#: A205185-001 **Sample ID:** Well 10 **Matrix:** Ground Water
Sampled By: John Igercic **Date:** 8/19/2002 **Time:** 7:20

Parameter	Result	Flag	Units	Dilution Factor	RL	Method	Analyzed		Worksheet #
Endrin	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
Endrin aldehyde	ND		ug/L	1	0.050	EPA 508	9/5/2002	fv	WS36281
Heptachlor	ND		ug/L	1	0.010	EPA 508	9/5/2002	fv	WS36281
Heptachlor epoxide	ND		ug/L	1	0.010	EPA 508	9/5/2002	fv	WS36281
Methoxychlor	ND		ug/L	1	10	EPA 508	9/5/2002	fv	WS36281
Chlorothalonil	ND		ug/L	1	5.0	EPA 508	9/5/2002	fv	WS36281
Hexachlorobenzene	ND		ug/L	1	0.50	EPA 508	9/5/2002	fv	WS36281
Hexachlorocyclopentadiene	ND		ug/L	1	1.0	EPA 508	9/5/2002	fv	WS36281
Propachlor	ND		ug/L	1	0.50	EPA 508	9/5/2002	fv	WS36281
Trifluralin	ND		ug/L	1	0.010	EPA 508	9/5/2002	fv	WS36281
Chlordane	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
Toxaphene	ND		ug/L	1	1.0	EPA 508	9/5/2002	fv	WS36281
Aroclor-1016	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
Aroclor-1221	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
Aroclor-1232	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
Aroclor-1242	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
A··clor-1248	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
ɔr-1254	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
Aroclor-1260	ND		ug/L	1	0.10	EPA 508	9/5/2002	fv	WS36281
Prep. EPA 525.2 Date: 8/27/2002	***By hp***								
bis (2-Ethylhexyl) phthalate	ND		ug/L	1	3.0	EPA 525.2	9/4/2002	bn	WS36374
bis (2-Ethylhexyl) adipate	ND		ug/L	1	5.0	EPA 525.2	9/4/2002	bn	WS36374
Benzo (a) Pyrene	ND		ug/L	1	0.10	EPA 525.2	9/4/2002	bn	WS36374
Aldicarb Sulfoxide	ND		ug/L	1	2.0	EPA 531.1	8/23/2002	dc	WS36315
Aldicarb Sulfone	ND		ug/L	1	2.0	EPA 531.1	8/23/2002	dc	WS36315
Oxamyl (VYDATE)	ND		ug/L	1	2.0	EPA 531.1	8/23/2002	dc	WS36315
Methomyl	ND		ug/L	1	2.0	EPA 531.1	8/23/2002	dc	WS36315
3-Hydroxycarbofuran	ND		ug/L	1	2.0	EPA 531.1	8/23/2002	dc	WS36315
Aldicarb (TEMIK)	ND		ug/L	1	2.0	EPA 531.1	8/23/2002	dc	WS36315
Propoxur	ND		ug/L	1	5.0	EPA 531.1	8/23/2002	dc	WS36315
Carbofuran (Furadan)	ND		ug/L	1	5.0	EPA 531.1	8/23/2002	dc	WS36315
Carbaryl	ND		ug/L	1	2.0	EPA 531.1	8/23/2002	dc	WS36315
Methiocarb	ND		ug/L	1	3.0	EPA 531.1	8/23/2002	dc	WS36315
Glyphosate	ND		ug/L	1	25	EPA 547	8/22/2002	dc	WS36279
2,3,7,8-TCDD (Dioxin)	ND		pg/L	1	5.0	EPA 1613	9/8/2002		WS36459
Prep. EPA 548.1 Date: 8/26/2002	***By hp***								
Endothall	ND		ug/L	1	45	EPA 548.1	8/29/2002	rt	WS36317
Gross alpha	2.20		pCi/L	1		Sub-contract	9/9/2002	sub	WS36461
Gross alpha counting error (+/-)	1.57		pCi/L	1		Sub-contract	9/9/2002	sub	WS36461

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CITY NO. WELL 12 — 10221 LESTERFORD AVE

STATE NO. 3S/12-02H04S

CITY OF DOWNEY

2/12

0	-	12	soil
12	-	20	blue clay
20	-	58	grey sand
58	-	123	yellow sand and gravel
123	-	168	sandy grey clay
168	-	186	grey sand
186	-	199	grey sand and gravel
199	-	212	yellow sand and gravel
212	-	215	yellow sand gravel and clay
215	-	228	sandy yellow clay
228	-	260	yellow clay
260	-	271	sandy yellow clay
271	-	284	yellow sand some gravel
284	-	298	yellow clay
298	-	305	yellow sand and gravel
305	-	312	yellow clay
312	-	352	yellow sand and gravel
352	-	444	sandy yellow clay

Perforate 301 - 305
316 - 352
8 holes to a circle
1 circle every 8 inches

Depth of well 444 feet
Depth to water 69 "

Started May 2, 1950
Completed May 13, 1950

1800 GPM - PUMPING RATE

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EDT

Date of Report: 03/03/10

Sample ID No. 3022031-04

Laboratory Name:
Weck Laboratories, Inc

Signature Lab Director: ________

Name of Sampler: John Igercic (C.O. Downey)

Date / time Sample collected:
03/02/19 1011

Date / Time Sample Received:
03/02/20 1511

Date Analyses Completed:
03/02/20

System name: DOWNEY - CITY, WATER DEPT.

System Number: 1910034

Name or number of Sample Source: WELL 12 (OLD PWC WELL 42B)

USER ID: 4TH

Station Number: 1910034-014

Laboratory code: 9588

Date / time Sample: | 03| 02 | 19 | 1011
YY MM DD TTTT

Date Analyses Completed: | 03| 02 | 20 |
YY MM DD

Submitted by: ________

Phone #: ________

Test Method	CHEMICAL	ENTRY #	ANALYSES RESULTS	MCL	DLR
	Nitrate (as NO3) (mg/L)	71850	12.00	45	2.000

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City of Industry, CA 91745

GENERAL MINERAL & PHYSICAL & INORGANIC ANALYSIS (9/99)

te of Report: 02/12/03 Sample ID No.2103020-05
atory Signature Lab
WECK LABORATORIES Director:
ne of Sampler:John Igercic Employed By: City of Downey
te/Time Sample Date/Time Sample Date Analyses
llected:02/10/30/1120 Received @ Lab:02/10/30/1546 Completed:02/11/27

stem System
ne:DOWNEY - CITY, WATER DEPT. Number: 1910034
ne or Number of Sample Source:WELL 12 (OLD PWC WELL 42B)

User ID: 4TH Station Number: 1910034-014
Date/Time of Sample: |02|10|30|1120| Laboratory Code: 9588
YY MM DD TTTT YY MM DD
Date Analysis completed: |02|11|27|
Submitted by:______ Phone #:______

E 1 OF 1 INORGANIC CHEMICALS

CL	REPORTING UNITS	CHEMICAL	ENTRY #	ANALYSES RESULTS	DLR
	ug/L	Chromium (Total Cr-CrVI screen) (ug/L)	A-044	ND	1.0

\+ Indicates Secondary Drinking Water Standards

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Report Date: Monday, December 2, 2002
Received Date: Wednesday, October 30, 2002
Received Time: 3:46 pm

Turnaround Time: Normal

Client: Central Basin Municipal Water District
17140 S. Avalon Blvd., Suite 210
Carson, CA 90746-1218

Phone: (310) 660-6246
FAX: (310) 217-2414

Attn: Cheryl Ross

Project: City of Downey

P.O.#:

Certificate of Analysis

ork Order No: 2103020-05 Sample ID: Well 12 Matrix: Water

mpled By: John Igercic Sampled: 30-Oct-02 11:20 Sample Note:

alyte	Result	Qualifiers	Units	Dilution	Reporting Limit	Method	Prepared	Analyzed		Batch
PA	ND		ug/l	1	1.0	EPA 515.3	07-Nov-02	15-Nov-02	em	W211207
rogate: 2,4-DCAA			*90.5 %*		*70-130*	*EPA 515.3*	*07-Nov-02*	*15-Nov-02*	*em*	*W211207*
thyl tert-butyl ether	ND		ug/l	1	3.0	EPA 524.2	05-Nov-02	05-Nov-02	an	W211243
r nzene	ND		ug/l	1	10	EPA 524.2	05-Nov-02	05-Nov-02	an	W211243
: 1,2-Dichlorobenzene-d4			*94.0 %*		*70-130*	*EPA 524.2*	*05-Nov-02*	*05-Nov-02*	*an*	*W211243*
rogate: 4-Bromofluorobenzene			*93.0 %*		*70-130*	*EPA 524.2*	*05-Nov-02*	*05-Nov-02*	*an*	*W211243*
Dinitrotoluene	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
Dinitrotoluene	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
tochlor	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
acil	ND		ug/l	1	2.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
-DDE	ND		ug/l	1	0.80	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
C	ND		ug/l	1	1.0	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
inate	ND		ug/l	1	0.90	EPA 525.2	05-Nov-02	13-Nov-02	BN	W211087
gate: 1,3-Dimethyl-2-nitrobenzene			*108 %*		*70-130*	*EPA 525.2*	*05-Nov-02*	*13-Nov-02*	*BN*	*W211087*
gate: Perylene-d12			*79.4 %*		*70-130*	*EPA 525.2*	*05-Nov-02*	*13-Nov-02*	*BN*	*W211087*
gate: Triphenyl phosphate			*104 %*		*70-130*	*EPA 525.2*	*05-Nov-02*	*13-Nov-02*	*BN*	*W211087*
l Chromium	ND		ug/l	1	1.0	EPA 200.8	27-Nov-02	02-Dec-02	at	W211694
hlorate	ND		ug/l	1	4.0	EPA 314.0	13-Nov-02	13-Nov-02	hp	W211317

e Narrative:

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2002 SEAL OF EXCELLENCE PROGRAM
Environmental

Authorized Signature

ELAP # 1132
LACSD # 10143

ıe results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

tes:
ɜ Chain of Custody document is part of the analytical report.
y remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
results are expressed on wet weight basis unless otherwise specified.
=Not detected, below the reporting limit.
=Subcontracted analysis, original report enclosed.

ɟs for Data Qualifiers:

8 = This analyte bias high in QC sample, but not found in samples.

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Weck Laboratories, Inc.
14859 E. Clark Avenue
City of Industry, CA 91745

9-23-02

ORGANIC CHEMICAL ANALYSIS (9/99)

ate of Report: 02/09/20 Sample ID No.A205219-012

ratory Signature Lab

: WECK LABORATORIES Director:

ame of Sampler:John Igercic Employed By: City of Downey

ate/Time Sample Collected:02/08/20/1440 Date/Time Sample Received @ Lab:02/08/21/1532 Date Analyses Completed:02/09/03

System Name:DOWNEY - CITY, WATER DEPT. System Number: 1910034

me or Number of Sample Source:WELL 12 (OLD PWC WELL 42B)

User ID: 4TH Station Number: 03S/12W-02H04 S

Date/Time of Sample: |02|08|20|1440| Laboratory Code: 9588

YY MM DD TTTT

Date Analysis completed: |02|09|03| (YY MM DD)

Submitted by: Phone #:

ge 1 of 3 REGULATED ORGANIC CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	Bromodichloromethane	32101	ND		.50
524.2	Bromoform	32104	0.82		.50
524.2	Chloroform (Trichloromethane)	32106	ND		.50
.2	Dibromochloromethane	32105	ND		.50
524.2	Total Trihalomethanes (THM'S/ TTHM)	82080	0.82	100	.50
524.2	Benzene	34030	ND	1	.50
524.2	Carbon Tetrachloride	32102	ND	.5	.50
524.2	1,2-Dichlorobenzene (o-DCB)	34536	ND	600	.50
524.2	1,4-Dichlorobenzene (p-DCB)	34571	ND	5	.50
524.2	1,1-Dichloroethane (1,1-DCA)	34496	ND	5	.50
524.2	1,2-Dichloroethane (1,2-DCA)	34531	ND	.5	.50
24.2	1,1-Dichloroethylene (1,1-DCE)	34501	ND	6	.50
24.2	cis-1,2-Dichloroethylene (c-1,2-DCE)	77093	ND	6	.50
24.2	trans-1,2-Dichloroethylene (t-1,2-DCE)	34546	ND	10	.50
24.2	Dichloromethane (Methylene Chloride)	34423	ND	5	.50
24.2	1,2-Dichloropropane	34541	ND	5	.50
24.2	Total 1,3-Dichloropropene	34561	ND	.5	.50
24.2	Ethyl Benzene	34371	ND	700	.50
24.2	Methyl tert-Butyl Ether(MTBE)	46491	ND	5	3.00
24.2	Monochlorobenzene (Chlorobenzene)	34301	ND	70	.50
24.2	Styrene	77128	ND	100	.50
24.2	1,1,2,2-Tetrachloroethane	34516	ND	1	.50
24.2	Tetrachloroethylene (PCE)	34475	ND	5	.50
24.2	Toluene	34010	ND	150	.50
24.2	1,2,4-Trichlorobenzene	34551	ND	70	.50
24.2	1,1,1-Trichloroethane (1,1,1-TCA)	34506	ND	200	.50
2	1,1,2-Trichloroethane (1,1,2-TCA)	34511	ND	5	.50
24.2	Trichloroethylene (TCE)	39180	ND	5	.50
24.2	Trichlorofluoromethane (FREON 11)	34488	ND	150	5.00

REGULATED ORGANIC CHEMICALS CONTINUED A205219-012

TEST HOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	Trichlorotrifluoroethane (FREON 113)	81611	ND	1200	10.00
524.2	Vinyl Chloride (VC)	39175	ND	.5	.50
524.2	m-Xylene	81710	ND		.50
524.2	m,p-Xylene	A-014	ND		.50
524.2	o-Xylene	77135	ND		.50
524.2	p-Xylene	78132	ND		.50
524.2	Total Xylenes (m,p, & o)	81551	ND	1750	.50
507	Thiobencarb (BOLERO)	A-001	ND	70	1.00
	UNREGULATED ORGANIC CHEMICALS				
524.2	tert-Amyl Methyl Ether (TAME)	A-034	ND		3.00
524.2	Bromobenzene	81555	ND		.50
524.2	Bromochloromethane	A-012	ND		.50
524.2	Bromomethane (Methyl Bromide)	34413	ND		.50
524.2	n-Butylbenzene	A-010	ND		.50
524.2	sec-Butylbenzene	77350	ND		.50
524.2	tert-Butylbenzene	77353	ND		.50
524.2	Chloroethane	34311	ND		.50
524.2	2-Chloroethylvinyl Ether	34576	ND		1.00
[illegible].2	Chloromethane (Methyl Chloride)	34418	ND		.50
[illegible].2	2-Chlorotoluene	A-008	ND		.50
524.2	4-Chlorotoluene	A-009	ND		.50
524.2	Dibromomethane	77596	ND		.50
524.2	1,3-Dichlorobenzene (m-DCB)	34566	ND		.50
524.2	Dichlorodifluoromethane	34668	ND		0.50
24.2	1,3-Dichloropropane	77173	ND		.50
24.2	2,2-Dichloropropane	77170	ND		.50
24.2	1,1-Dichloropropene	77168	ND		.50
24.2	Diisopropyl Ether (DIPE)	A-036	ND		3.00
24.2	Ethyl tert-Butyl Ether (ETBE)	A-033	ND		3.00
24.2	Hexachlorobutadiene	34391	ND		.50
24.2	Isopropylbenzene (Cumene)	77223	ND		.50
24.2	p-Isopropyltoluene	A-011	ND		.50
25.2	Naphthalene	34696	ND		.50
24.2	n-Propylbenzene	77224	ND		.50
24.2	1,1,1,2-Tetrachloroethane	77562	ND		.50
24.2	1,2,3-Trichlorobenzene	77613	ND		.50
24.2	1,2,3-Trichloropropane	77443	ND		.005
24.2	1,2,4-Trimethylbenzene	77222	ND		.50
24.2	1,3,5-Trimethylbenzene	77226	ND		.50
4.2	Methyl Ethyl Ketone (MEK, Butanone)	81595	ND		5.00
4.2	Methyl Isobutyl Ketone (MIBK)	81596	ND		5.00

ᵃᵇᵒratory comments and description of any additional components found:

romoform and Bromodichloromethane also found in travel blank due to

ntamination in the preservative solution.

Post-It Fax Note 7671 | Date 9-3 | # of pages ▸ 5
To [illegible] | From [illegible]
Co./Dept. [illegible] | Co. [illegible]
Phone # | Phone #
Fax # 949-752-1207 | Fax #

TABLE 5-1

CITY OF SANTA FE SPRINGS
WELL DATA

Well No.	Ground Elev.(ft)	Date Drilled	Well Depth (ft)	Casing Dia.	Normal Pump(a) Operating Characteristics		Groundwater Level		Draw-down (ft)	Spec. Capac. (gpm/ft)	Overall(a) Plant Effic.	KWH/ Acre-ft	Comments
					Discharge (gpm)	TDH (ft)	Static (ft)	Pumping (ft)					
1	151	7/61	984	0-300-16" 300-900-12"	1,567	234	71	92	21	72.5	63.3	377	1981 Data
2	75	6/64	1,250	0-336-18" 336-894-14"	2,200	370	95	155	60	32.2	68.5	605	1976 Data
4	127	6/78	800	0-250-18" 250-780-16"	1200 ~~1,800~~	252	95	113	18	55.6	N .A.	--	1980 Data
~~[illegible]~~	147	12/49	518	16"	~~[illegible]~~	257	81	123	42	25	N.A.	--	1978 Data
309 ~~[illegible]~~	128	Pre 1957	621	16"	767 ~~[illegible]~~	231	54	83	29	26	55	430	1981 Data
~~308~~	126	7/51	266	12"	~~800~~	247	76	87	11.4	44.3	56.1	451	1981 Data
~~357~~	127	7/62	859	16"	~~1,100~~	384	109	180	71.2	15.4	60	654	1981 Data

4967 Total

N.A. - Not Available.
(a) From pump test results

Well 4

1200 GPM AFTER SEALING OFF PORTION OF CASING
1800 GPM PRIOR TO IT

[illegible]:
[illegible] 27 cfs

...to comply with
...al requirements

THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Well 4

No. 126733

...ce of Intent No. 97887

...l Permit No. or Date

STATE WELL # 3S/11W 06D03S

State Well No.

Other Well No.

(1) OWNER:

Name ~~Redevelopment Agency of~~ CITY OF SANTA FE SPRINGS
11710 Telegraph Road
Santa Fe Springs, Calif. Zip 90670

(2) LOCATION OF WELL (See instructions):

...nty Los Angeles Owner's Well Number [redacted]
...address if different from above
...nship Range [redacted] Section
...ance from cities, roads, railroads, fences, etc. 100 ft. North of
...legraph Road on Pioneer Blvd. Santa Fe Springs
...lif. 90670 11921 TELEGRAPH RD.

WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☒
Other ☐

(12) WELL LOG:

Total depth 840 ft. Depth of completed well 780 ft.

from ft. to ft.	Formation (Describe by color, character, size or material)
0-7 ft.	top soil
7-23 ft.	sand, gravel, small rock 1/2" to 1"
23-31 ft.	sand, gravel small rock 1/2" to 2-1/2
31-40 ft.	brown clay, with small amt. sand/grave
40-80 ft.	sand, gravel small rock 1/2"
80-104 ft.	sand, gravel some clay
104-119 ft.	large rock, sand and gravel
119-127 ft.	brown clay
127-170 ft.	sand, gravel
170-200 ft.	blue clay
200-214 ft.	cement, sand, gravel (hard drilling
214-244 ft.	blue/gray clay some gravel
244-255 ft.	blue clay with cemented sand
255-270 ft.	sand, gravel small rocks
270-306 ft.	grayish/blue clay
306-310 ft.	grayish/blue clay, large rocks
310-333 ft.	sand, gravel small rocks
333-400 ft.	gray clay, some sand, gravel
400-430 ft.	cemented sand
430-449 ft.	coarse sand, gravel
449-497 ft.	gray clay, with cemented sand & roc
497-520 ft.	blue clay, sand, gravel and rocks
520-527 ft.	blue clay
527-542 ft.	gray clay, hard black rock
542-570 ft.	clay, some gravel, sea shells
570-630 ft.	gray clay, some gravel
630-703 ft.	sand, gravel
703-710 ft.	blue clay
710-800 ft.	sand, gravel, some clay streaks

SEALED PERFORATIONS 1991

SILVERADO LOCATION

(5) EQUIPMENT:

Rotary ☐ Reverse ☒
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☒ No ☐ Size 3/8" minus
Diameter of bore 30"
Packed from 0 to 780 ft.

(7) CASING INSTALLED:

Steel XX Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
	256	18"	5/16"
56	780	16"	5/16"

(8) PERFORATIONS:

Type of perforation or size of screen: Ross Ful-flo louvre hole

From ft.	To ft.	Slot size
~~300~~	~~240~~	3/32" x 2-3/8"
~~380~~	~~580~~	"
620	760	"

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 67 ft.
Were strata sealed against pollution? Yes ☐ No ☒ Interval ft.
Method of sealing 9 sack grout mix

(10) WATER LEVELS:

Depth of first water, if known 82 ft.
Standing level after well completion 95 ft.

(11) WELL TESTS:

Was well test made? Yes ☒ No ☐ If yes, by whom? Beylik Drilling
Type of test Pump ☒ Bailer ☐ Air lift ☐
Depth to water at start of test 82 ft. At end of test 95 77 ft
Discharge 4000 gal/min after 41-1/2 hours Water temperature
Chemical analysis made? Yes ☐ No ☒ If yes, by whom?
Was electric log made? Yes ☒ No ☐ If yes, attach copy to this report

Work started 5/5/78 19 Completed 6/16/78 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED John R. Beylik (Well Driller)

NAME BEYLIK DRILLING, INC. (Person, firm, or corporation) (Typed or printed)

Address 591 S. Walnut St.

City La Habra, Calif. Zip 90631

License No. 306291-C-57 &C61 Date of this report July 7, 1978

DWR 188 (REV. 7-76)

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

✓ CITY ENGINEER
DUPLICATE ASST. CITY ENGR.
AIN THIS COPY ST. MAINT. SUPT.
file

WATER WELL DRILLERS RE...

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

Do Not Fill in
Nº 30410
State Well No.
Other Well No.

(1) OWNER:
Name City of Santa Fe Springs
Address Santa Fe Springs, California

(2) LOCATION OF WELL: WELL 1
County Los Angeles Owner's number, if any 1
R. F. D. or Street No. Rice Road and Burke Street, in back of Fire Station Number 2
STATE WELL # - 2S/11W-30R3S

(3) TYPE OF WORK (check):
New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☐ Reverse
Cable ☐
Dug Well ☐

(6) CASING INSTALLED:
SINGLE ☒ DOUBLE ☐

From ft.	to ft.	Diam.	Gage or Wall
0	300	16	5/16
300	900	12	5/16
0	50	30	1/4

If gravel packed

Diameter of Bore	from ft.	to ft.
28	0	904

Type and size of shoe or well ring Bail Plug
Size of gravel: 3/8" to 20s
Describe joint Welded

(7) PERFORATIONS:
Type of perforator used Louvre Horizontal
Size of perforations 2 1/2 in., length, by 3/8 in.

From ft.	to ft.	Perf. per row	Rows per ft.
200 (230)	260 (200)	30	1
300 (300)	900 (900)	31	1

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☐ Yes ☐ No To what depth 50 ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata
From ft. to ft.
Method of Sealing

(9) WATER LEVELS:
Depth at which water was first found 206 ft.
Standing level before perforating 205 ft.
Standing level after perforating 205 ft.

(10) WELL TESTS:

(11) WELL LOG:
Total depth 904 ft. Depth of completed well 900 ft.
Formation: Describe by color, character, size of material, and structure.

From ft.	to ft.	Formation
0	10	Surface soil
10	50	Sand, gravel, silty clay
50	53	Brown clay
53	63	Reddish brown clay
63	102	Sand and small gravel
102	103	Brown silty clay
103	121	Fine sand
121	153	Brown clay and silt
153	173	Sand and small gravel
173	193	Clay and silt
193	273	Sand and silt, layers
273	303	Grey clay and silt layers
303	313	Sand and silt
313	323	Clay with silt layers
323	353	Coarse sand and gravel
353	423	Hard blue grey clay and sand
423	433	Fine sand
433	473	Fine sand and soft clay layers
473	526	Clay with sand layers
526	534	Sand and gravel (small)
534	574	Hard clay layers of sand
574	884	Sand and gravel (coarse)
884	894	Siltstone
894	904	Very hard sandstone

60
10
8
10
48

RECEIVED
AUG 11 1961
CITY OF SANTA FE SPRINGS PUBLIC WORKS

Work started June 1, 1961 Completed July 15, 1961

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME John ... Pavlik (Person, firm, or corporation) (Typed or printed)
Address 11113 ...
Whittier, Calif.
[signature] Pavlik

Sep. 08 2003 08:05AM P3 FAX NO. : 562 4621231

Well 309

STATE OF CALIFORNIA

State Well No.

Other Well No.

(1) OWNER:

Name ucarbon [illegible] System,

Address 1[illegible] [illegible]legrove,

[illegible] [illegible]

(2) LOCATION OF WELL:

County Los Angeles Owner's number, if any—

R. F. D. or Street No.

/ > 11130 [illegible] lene St.

[illegible] Springs, Calif.

Lot 190 Tract 14944

STATE WELL # 3S/12W-18B

(3) TYPE OF WORK (check):

New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐

Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐

Cable ☒

Dug Well ☐

(6) CASING INSTALLED:

SINGLE ☐ DOUBLE ☒

From ft.	to ft.	Diam.	Gage of Wall
0	1052	16"	8 Ga

If gravel packed

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring 16"

Size of gravel:

Describe joint [illegible]

(7) [redacted]

Type of perforator used [illegible] Louvier

Size of perforations 2 1/2 x 1/4 in., length, by in.

From ft. to 0 perf. per circle Perf. per row Rows per ft.

1 ft. apart

[redacted]

(8) CONSTRUCTION:

Was a surface sanitary seal provided? ☐ Yes ☒ No To what depth ft.

Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata

From ft. to ft.

Method of Sealing

(9) WATER LEVELS:

Depth at which water was first found ft.

Standing level before perforating [illegible] ft.

Standing level after perforating 131 ft.

WELL TESTS:

Was a pump test made? ☒ Yes ☐ No If yes, by whom? [illegible] Well Supply

Yield: 2300 gal./min. with 121 ft. draw down after hrs.

Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

(11) WELL LOG:

Total depth 1052 ft. Depth of completed well 1052 ft.

Formation: *Describe by color, character, size of material, and structure.*

From ft.	to ft.	Formation
0	15	yellow top soil
15	26	blue clay
26	37	blue tight sand & gravel with streaks of clay
37	49	yellow course sand & gravel up to 1"
49	96	yellow tight sand & gravel
96	121	yellow sand & pea gravel with streaks of clay
121	217	yellow sandy clay
217	225	yellow hard sandy clay mixed with gravel
225	228	yellow cemented sand & pea gravel
228	253	yellow course muddy sand & gravel up to 2 3"
253	271	yellow tough clay
271	277	yellow tight course sand & gravel
277	418	yellow hard sandy clay
418	448	blue hard sandy clay
448	511	yellow hard sandy clay
511	515	yellow tight muddy sand and pea gravel
515	539	yellow hard sandy clay
539	614	blue hard sandy clay
614	632	yellow soft sandy clay
632	650	blue soft sandy clay
650	657	blue muddy sand & gravel up to 1½"
657	667	blue muddy sand, sea shells & few pea gravel
667	770	blue hard sandy clay
770	825	blue clay & layers of sand stone
825	836	blue muddy fine sand
836	859	blue muddy sand & pea gravel with layers of clay

Work started 1 2 1963 Completed 2 1 1963

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME [illegible] Well Supply (Person, firm, or corporation) (Typed or printed)

Address

11234 S Norwalk Blvd,

Santa Fe Springs, Calif.

[SIGNED] Well Driller

License No. 120487 Dated July 1, 1962

SACRAMENTO 8, CALIFORNIA

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In
State Well No.
Other Well No.
Region

Well log (continued):

Total depth of well 1052 ft.

Depth From Ground Surface	Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).
859 ft. to 863 ft.	blue muddy sand & fine gravel
863 " " 884 "	blue sand & gravel up to 1½" xx
884 " " 889 "	blue course sand & gravel, pea
889 " " 925 "	blue tight sand & pea gravel with layers of sandstone
925 " " 1002 "	course sand & small gravel xxx
1002 " " 1052 "	brown tough clay

E/0 [illegible] [illegible] Marlene
Santa Fe Springs, Calif.
8" Cement plut

additional space is required continue on DWR Form No. 246—Supplement, and attach to respective report copies.

FROM : SFS Public Wks/Eng FAX NO. : 562 4621231 Jul. 02 2003 02:35PM P1

Post-it Fax Note 7671 | Date 7-2-03 | # of pages 3
To Jason Vallin | From R. Hickey
Co./Dept. | Co. SFS
Phone # | Phone #
Fax # 949-752-1307 | Fax #

Weck Laboratories, Inc.

Environmental and Analytical Services - Since 1964

EDT

Date of Report: 03/06/25

Sample ID No. 3061222-01

Laboratory Name:
Weck Laboratories, Inc

Signature Lab Director:

Name of Sampler: Carlos Navarro @ Weck Labs

Date / time Sample collected:
03/06/12 1005

Date / Time Sample Received:
03/06/12 1701

Date Analyses Completed:
03/06/19

RECEIVED CITY OF SANTA FE SPRINGS PUBLIC WORKS 2003 JUN 30 PM 2:54

System name: SANTA FE SPRINGS - CITY, WATER DEPT.

System Number: 1910245

Name or number of Sample Source: WELL 01

USER ID: 4TH

Station Number: 1910245-004

Laboratory code: 9588

Date / time Sample: | 03 | 06 | 12 | 1005
YY MM DD TTTT

Date Analyses Completed: | 03 | 06 | 19 |
YY MM DD

Submitted by: ______________________

Phone #: ______________________

Test Method	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
.2	Chloroform (Trichloromethane)	32106	ND	X	.50
.2	Bromodichloromethane	32101	ND	X	.50
.2	Dibromochloromethane	32105	ND	X	.50
.2	Bromoform	32104	ND	X	.50
.2	Total Trihalomethanes (TM'S/ TTHM)	82080	ND	100	.50
.2	Vinyl Chloride (VC)	39175	ND	.5	.50
.2	Chloroethane	34311	ND		.50
.2	Trichlorofluoromethane (FREON 11)	34488	ND	150	5.00
.2	Trichlorotrifluoroethane (FREON 113)	81611	ND	1200	10.00
.2	1,1-Dichloroethylene (1,1-DCE)	34501	ND	6	.50
.2	Dichloromethane (Methylene Chloride)	34423	0.81	5	.50
.2	trans-1,2-Dichloroethylene (t-1,2-DCE)	34546	ND	10	.50
.2	Methyl tert-Butyl Ether(MTBE)	46491	ND	5	3.00
.2	1,1-Dichloroethane (1,1-DCA)	34496	ND	5	.50
.2	cis-1,2-Dichloroethylene (c-1,2-DCE)	77093	ND	6	.50
.2	1,1,1-Trichloroethane (1,1,1-TCA)	34506	ND	200	.50
.2	Carbon Tetrachloride	32102	ND	.5	.50
.2	Benzene	34030	ND	1	.50
	1,2-Dichloroethane (1,2-DCA)	34531	ND	.5	.50
	Trichloroethylene (TCE)	39180	1.40	5	.50
.2	1,2-Dichloropropane	34541	ND	5	.50
.2	cis-1,3-Dichloropropene (D-D)	34704	ND	0.5	
.2	Toluene	34010	ND	150	.50
.2	trans-1,3-Dichloropropene	34699	ND	0.5	

Weck Laboratories, Inc.
Environmental and Analytical Services - Since 1964

61222-01

Test Method	CHEMICAL ALL CHEMICALS REPORTED	ENTRY #	ANALYSES RESULTS	MCL	DLR
4.2	Tetrachloroethylene (PCE)	34475	ND	5	.50
4.2	Monochlorobenzene (Chlorobenzene)	34301	ND	70	.50
4.2	Ethyl Benzene	34371	ND	700	.50
4.2	m,p-Xylene	A-014	ND		.50
4.2	o-Xylene	77135	ND		.50
4.2	Styrene	77128	ND	100	.50
4.2	1,1,2,2-Tetrachloroethane	34516	ND	1	.50
4.2	1,4-Dichlorobenzene (p-DCB)	34571	ND	5	.50
1.2	1,2-Dichlorobenzene (o-DCB)	34536	ND	600	.50
1.2	1,2,4-Trichlorobenzene	34551	ND	70	.50
1.2	Total 1,3-Dichloropropene	34561	ND	.5	.50
1.2	Total Xylenes (m, p, & o)	81551	ND	1750	.50
	UNREGULATED ORGANIC CHEMICALS				
1.2	Dichlorodifluoromethane	34668	ND		0.50
1.2	Chloromethane (Methyl Chloride)	34418	ND		.50
1.2	Bromomethane (Methyl Bromide)	34413	ND		.50
1.2	Chloroethane	34311	ND		.50
.2	Diisopropyl Ether (DIPE)	A-036	ND		3.00
.2	Ethyl tert-Butyl Ether (ETBE)	A-033	ND		3.00
	Methyl Ethyl Ketone (MEK, Butanone)	81595	ND		5.00
.2	2,2-Dichloropropane	77170	ND		.50
.2	Bromochloromethane	A-012	ND		.50
.2	1,1-Dichloropropene	77168	ND		.50
.2	tert-Amyl Methyl Ether (TAME)	A-034	ND		3.00
.2	Dibromomethane	77596	ND		.50
.2	cis-1,3-Dichloropropene (D-D)	34704	ND	0.5	
.2	Methyl Ethyl Ketone (MEK, Butanone)	81595	ND		5.00
.2	2-Chloroethylvinyl Ether	34576	ND		1.00
.2	trans-1,3-Dichloropropene	34699	ND	0.5	
.2	1,3-Dichloropropane	77173	ND		.50
.2	1,1,1,2-Tetrachloroethane	77562	ND		.50
.2	Isopropylbenzene (Cumene)	77223	ND		.50
2	Bromobenzene	81555	ND		.50
2	1,2,3-Trichloropropane	77443	ND		.005
2	n-Propylbenzene	77224	ND		.50
2	2-Chlorotoluene	A-008	ND		.50
2	4-Chlorotoluene	A-009	ND		.50
2	1,3,5-Trimethylbenzene	77226	ND		.50
2	tert-Butylbenzene	77353	ND		.50
2	1,2,4-Trimethylbenzene	77222	ND		.50
2	sec-Butylbenzene	77350	ND		.50
2	1,3-Dichlorobenzene (m-DCB)	34566	ND		.50
2	p-Isopropyltoluene	A-011	ND		.50
2	n-Butylbenzene	A-010	ND		.50
	Hexachlorobutadiene	34391	ND		.50
2	1,2,3-Trichlorobenzene	77613	ND		.50

Narrative:

INORGANIC CHEMICALS 2091823-01

MCL	REPORTING UNITS	CHEMICAL	ENTRY #	ANALYSES RESULTS	DLR
1000	ug/L	Aluminum (Al) (ug/L)	01105	ND	50.0
6	ug/L	Antimony (ug/L)	01097	ND	6.0
50	ug/L	Arsenic (As) (ug/L)	01002	ND	2.0
1000	ug/L	Barium (Ba) (ug/L)	01007	ND	100.0
4	ug/L	Beryllium (ug/L)	01012	ND	1.0
5	ug/L	Cadmium (Cd) (ug/L)	01027	ND	1.0
50	ug/L	Chromium (Total Cr) (ug/L)	01034	ND	10.0
1000	ug/L+	Copper (Cu) (ug/L)	01042	ND	50.0
300	ug/L+	Iron (Fe) (ug/L)	01045	ND	100.0
	ug/L	Lead (Pb) (ug/L)	01051	ND	5.0
50	ug/L+	Manganese (Mn) (ug/L)	01055	ND	20.0
2	ug/L	Mercury (Hg) (ug/L)	71900	ND	1.0
100	ug/L	Nickel (ug/L)	01067	ND	10.0
50	ug/L	Selenium (Se) (ug/L)	01147	5.0	5.0
100	ug/L+	Silver (Ag) (ug/L)	01077	ND	10.0
2	ug/L	Thallium (ug/L)	01059	ND	1.0
5000	ug/L	Zinc (Zn) (ug/L)	01092	ND	50.0

ADDITIONAL ANALYSES

		Agressiveness Index	82383	12.3	
.000	ug/L	Nitrite as Nitrogen(N) (ug/L)	00620	ND	400

+ Indicates Secondary Drinking Water Standards

EDT

it Fax Note 7671	Date 9-8	# of pages 4
To Tod Walker	From Ron Hoskins	
Co./Dept. DM	Co. City of SFS	
Phone #	Phone #	
949-752-1307	Fax #	

atories, Inc.
Clark Avenue
stry, CA 91745
AL ANALYSIS (9/99)

Well 4

Sample ID No.2091823-03
Signature Lab
Director: [signature]
Employed By: Weck Laboratories, Inc.

e/Time Sample
lected:02/09/18/1135

Date/Time Sample
Received @ Lab:02/09/18/1559

Date Analyses
Completed:02/09/20

tem
e:SANTA FE SPRINGS - CITY, WATER DEPT.
e or Number of Sample Source:WELL 04 - STANDBY

System
Number: 1910245

User ID: 4TH
Station Number: 03S/11W-06D03 S
Date/Time of Sample: |02|09|18|1135|
YY MM DD TTTT
Laboratory Code: 9588
YY MM DD
Date Analysis completed: |02|09|20|
Submitted by:____________
Phone #:____________

e 1 of 2 REGULATED ORGANIC CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
	Bromodichloromethane	32101	ND		.50
	Bromoform	32104	ND		.50
4.2	Chloroform (Trichloromethane)	32106	ND		.50
4.2	Dibromochloromethane	32105	ND		.50
4.2	Total Trihalomethanes (THM'S/ TTHM)	82080	ND	100	.50
4.2	Benzene	34030	ND	1	.50
4.2	Carbon Tetrachloride	32102	ND	.5	.50
4.2	1,2-Dichlorobenzene (o-DCB)	34536	ND	600	.50
4.2	1,4-Dichlorobenzene (p-DCB)	34571	ND	5	.50
4.2	1,1-Dichloroethane (1,1-DCA)	34496	ND	5	.50
4.2	1,2-Dichloroethane (1,2-DCA)	34531	ND	.5	.50
4.2	1,1-Dichloroethylene (1,1-DCE)	34501	ND	6	.50
4.2	cis-1,2-Dichloroethylene (c-1,2-DCE)	77093	ND	6	.50
4.2	trans-1,2-Dichloroethylene (t-1,2-DCE)	34546	ND	10	.50
4.2	Dichloromethane (Methylene Chloride)	34423	ND	5	.50
4.2	1,2-Dichloropropane	34541	ND	5	.50
4.2	Total 1,3-Dichloropropene	34561	ND	.5	.50
4.2	Ethyl Benzene	34371	ND	700	.50
524.2	Methyl tert-Butyl Ether(MTBE)	46491	ND	5	3.00
4.2	Monochlorobenzene (Chlorobenzene)	34301	ND	70	.50
4.2	Styrene	77128	ND	100	.50
4.2	1,1,2,2-Tetrachloroethane	34516	ND	1	.50
4.2	Tetrachloroethylene (PCE)	34475	ND	5	.50
2	Toluene	34010	ND	150	.50
4.2	1,2,4-Trichlorobenzene	34551	ND	70	.50
4.2	1,1,1-Trichloroethane (1,1,1-TCA)	34506	ND	200	.50
4.2	1,1,2-Trichloroethane (1,1,2-TCA)	34511	ND	5	.50
4.2	Trichloroethylene (TCE)	39180	ND	5	.50
[illegible]	Trichlorofluoromethane (FREON 11)	34488	ND	150	5.00

 REGULATED ORGANIC CHEMICALS CONTINUED 2091823-03

TEST ETHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
24.2	Trichlorotrifluoroethane (FREON 113)	81611	ND	1200	10.00
4.2	Vinyl Chloride (VC)	39175	ND	.5	.50
4.2	m-Xylene	81710	ND		.50
4.2	m,p-Xylene	A-014	ND		.50
4.2	o-Xylene	77135	ND		.50
4.2	p-Xylene	78132	ND		.50
4.2	Total Xylenes (m,p, & o)	81551	ND	1750	.50

UNREGULATED ORGANIC CHEMICALS

TEST ETHOD	CHEMICAL	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
4.2	tert-Amyl Methyl Ether (TAME)	A-034	ND		3.00
4.2	Bromobenzene	81555	ND		.50
4.2	Bromochloromethane	A-012	ND		.50
4.2	Bromomethane (Methyl Bromide)	34413	ND		.50
4.2	n-Butylbenzene	A-010	ND		.50
4.2	sec-Butylbenzene	77350	ND		.50
4.2	tert-Butylbenzene	77353	ND		.50
4.2	Chloroethane	34311	ND		.50
[illegible]	2-Chloroethylvinyl Ether	34576	ND		1.00
2	Chloromethane (Methyl Chloride)	34418	ND		.50
4.2	2-Chlorotoluene	A-008	ND		.50
4.2	4-Chlorotoluene	A-009	ND		.50
4.2	Dibromomethane	77596	ND		.50
4.2	1,3-Dichlorobenzene (m-DCB)	34566	ND		.50
4.2	Dichlorodifluoromethane	34668	ND		0.50
4.2	1,3-Dichloropropane	77173	ND		.50
4.2	2,2-Dichloropropane	77170	ND		.50
4.2	1,1-Dichloropropene	77168	ND		.50
24.2	Diisopropyl Ether (DIPE)	A-036	ND		3.00
4.2	Ethyl tert-Butyl Ether (ETBE)	A-033	ND		3.00
4.2	Hexachlorobutadiene	34391	ND		.50
4.2	Isopropylbenzene (Cumene)	77223	ND		.50
4.2	p-Isopropyltoluene	A-011	ND		.50
4.2	Naphthalene	34696	ND		.50
4.2	n-Propylbenzene	77224	ND		.50
4.2	1,1,1,2-Tetrachloroethane	77562	ND		.50
4.2	1,2,3-Trichlorobenzene	77613	ND		.50
4.2	1,2,3-Trichloropropane	77443	ND		.005
4.2	1,2,4-Trimethylbenzene	77222	ND		.50
4.2	1,3,5-Trimethylbenzene	77226	ND		.50
524.2	Methyl Ethyl Ketone (MEK, Butanone)	81595	ND		5.00
524.2	Methyl Isobutyl Ketone (MIBK)	81596	ND		5.00

 INORGANIC CHEMICALS 2091823-01

MCL	REPORTING UNITS	CHEMICAL	ENTRY #	ANALYSES RESULTS	DLR
1000	ug/L	Aluminum (Al) (ug/L)	01105	ND	50.0
6	ug/L	Antimony (ug/L)	01097	ND	6.0
50	ug/L	Arsenic (As) (ug/L)	01002	ND	2.0
1000	ug/L	Barium (Ba) (ug/L)	01007	ND	100.0
4	ug/L	Beryllium (ug/L)	01012	ND	1.0
5	ug/L	Cadmium (Cd) (ug/L)	01027	ND	1.0
50	ug/L	Chromium (Total Cr) (ug/L)	01034	ND	10.0
1000	ug/L+	Copper (Cu) (ug/L)	01042	ND	50.0
300	ug/L+	Iron (Fe) (ug/L)	01045	ND	100.0
	ug/L	Lead (Pb) (ug/L)	01051	ND	5.0
50	ug/L+	Manganese (Mn) (ug/L)	01055	ND	20.0
2	ug/L	Mercury (Hg) (ug/L)	71900	ND	1.0
100	ug/L	Nickel (ug/L)	01067	ND	10.0
50	ug/L	Selenium (Se) (ug/L)	01147	5.0	5.0
100	ug/L+	Silver (Ag) (ug/L)	01077	ND	10.0
2	ug/L	Thallium (ug/L)	01059	ND	1.0
5000	ug/L	Zinc (Zn) (ug/L)	01092	ND	50.0

ADDITIONAL ANALYSES

		Agressiveness Index	82383	12.3	
1000	ug/L	Nitrite as Nitrogen(N) (ug/L)	00620	ND	400

+ Indicates Secondary Drinking Water Standards

EDT

Weck Laboratories, Inc
14859 E. Clark Ave
Industry, CA 91745

ORGANIC CHEMICAL ANALYSIS (9/99)

te of Report: 02/01/18 Sample ID No.A109056-001
boratory Signature Lab
me: WECK LABORATORIES Director: [signature]
me of Sampler:Carlos Navarro Employed By: Weck Laboratories, Inc.
te/Time Sample Date/Time Sample Date Analyses
llected:01/12/21/1000 Received @ Lab:01/12/21/1436 Completed:01/12/26

===

ystem System
me:SANTA FE SPRINGS - CITY, WATER DEPT. Number: 1910245
me or Number of Sample Source:WELL 04 - STANDBY

****

User ID: 4TH Station Number: 03S/11W-06D03 S *
Date/Time of Sample: |01|12|21|1000| Laboratory Code: 9588 *
YY MM DD TTTT YY MM DD *
Date Analysis completed: |01|12|26| *
Submitted by:______________________ Phone #: _______________ *

****

age 1 of 1 REGULATED ORGANIC CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
4.2	Methyl tert-Butyl Ether(MTBE)	46491	ND	5	3.00

RECEIVED
CITY OF SANTA FE SPRINGS
PUBLIC WORKS
2002 JAN 23 AM 9:54

US WATER,INC.
ROCKY MOUNTAIN WATER
10260 MATERN PLACE
SANTA FE SPRINGS, CA 90670
562-946-0078 FAX 562-946-4352

FACSIMILE TRANSMITTAL SHEET

TO: Sharon Wallen	FROM: Todd Ouwehand
COMPANY: CDM	DATE: 08-28-2003
FAX NUMBER: 949 752-1307	TOTAL NO. OF PAGES INCLUDING COVER: 12
PHONE NUMBER	SENDER'S REFERENCE NUMBER:
RE:	YOUR REFERENCE NUMBER:

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Water quality report for 2003 is typical of all years you requested.

ENCLOSURE/HOUSING

Type	NONE	
Condition	NA	
Pit depth (if applicable)	NA	
Pit drained? (if applicable)	NA	
Floor (material)	NA	

WELL CONSTRUCTION

Date drilled	OCT 1987	ACT
Drilling Method	REVERSE	ACT
Depth of Bore Hole (feet below ground surface)	540	ACT
Casing depth (see Reference)	0-50, 0-500	ACT
Casing diameter (see Reference)	18 / 6 5/8	ACT
Casing material (see Reference)	STEEL	ACT
Conductor casing used?	YES	
Conductor casing removed?	NO	
Depth(s) and Length(s) of screened interval(s)	300-500	ACT
* Annular seal? (yes or no) (see Reference)	YES	ACT
* Depth of annular seal (ft)	50	ACT
Material of annular seal (cement grout, bentonite, etc.)	GROUT	ACT
Gravel pack, depth to top (feet below ground surface)	0	ACT
Total length of gravel pack (ft)	540	ACT

AQUIFER

* Aquifer materials (see Reference)	ROCK, GRAVEL, CLAY	
* Is the well screened in fractured rock?	NO	
* Confining layer (impervious strata) above aquifer? (yes or no)	YES	
Thickness of confining layer, if known (ft)	UNKNOWN	
Depth to confining layer, if known (ft below ground surface)	325	ACT
Sanitary seal terminates in impervious strata? (yes or no)	NO	
* Static water level (ft below ground surface)	60	ACT
Date static water level measured	JUNE 1997	ACT
Pumping water level (ft below ground surface)	70	ACT
Date pumping water level measured	JUNE 1997	ACT

WELL PRODUCTION

Well yield (gpm)	UNKNOWN	
Well yield based on (i.e. pump test, etc.)	NA	
Date well yield measured	NA	
Is the well metered? (yes or no)	YES	
Production (gallons per year)	9,648,500	ACT
Frequency of use (hours/year)	4864	ACT
Typical pumping duration (hours/day)	16	ACT

BSK ANALYTICAL LABORATORIES

Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 02/19/2003

BSK Submission #: 2003011095

BSK Sample ID #: 285663

Project ID: Project Desc: Annual
Submission Comments:

Sample Type:	Liquid	Date Sampled:	01/22/2003
Sample Description:	Source Water	Time Sampled:	1500
Sample Comments:	Sample dated 01/21/03 0945; received sealed and split in lab.	Date Received:	01/22/2003

Inorganics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
Alkalinity (as CaCO3)	SM 2320 B	170	mg/L	1	1		01/23/2003	01/23/2003
Aluminum (Al)	EPA 200.7	ND	mg/L	1	0.05	0.2	01/24/2003	01/28/2003
Antimony (Sb)	EPA 200.8	ND	mg/L	1	0.002	0.006	01/24/2003	01/30/2003
Arsenic (As)	EPA 200.8	ND	mg/L	1	0.002	0.05	01/24/2003	01/30/2003
Barium (Ba)	EPA 200.7	ND	mg/L	1	0.05	1.0	01/24/2003	01/28/2003
Beryllium (Be)	EPA 200.8	ND	mg/L	1	0.001	0.004	01/24/2003	02/03/2003
Bicarbonate (as CaCO3)	SM 2320 B	170	mg/L	1	1		01/23/2003	01/23/2003
Bromate (BrO3)	EPA 300.1	ND	mg/L	10	0.050	0.010	01/23/2003	01/23/2003
Cadmium (Cd)	EPA 200.8	ND	mg/L	1	0.001	0.005	01/24/2003	01/30/2003
Calcium (Ca)	EPA 200.7	45	mg/L	1	0.1		01/24/2003	01/28/2003
Carbonate (as CaCO3)	SM 2320 B	ND	mg/L	1	1		01/23/2003	01/23/2003
Chloride (Cl)	EPA 300.0	24	mg/L	2	2	250	01/23/2003	01/23/2003
Chlorine - as Free (Cl2)	SM 4500-Cl-F	ND	mg/L	1	0.1	4.0	01/22/2003	01/22/2003
Chlorine - as Total (Cl2)	SM 4500-Cl-F	ND	mg/L	1	0.1	4.0	01/22/2003	01/22/2003
Chlorine Dioxide (ClO2) as Cl2	SM 4500-ClO2-D	ND	mg/L	1	0.1	0.8	01/22/2003	01/22/2003
Chlorite (ClO2)	EPA 300.1	ND	mg/L	10	0.050	1.0	01/23/2003	01/23/2003
Chromium - Total (Cr)	EPA 200.8	0.0020	mg/L	1	0.001	0.05	01/24/2003	02/03/2003
Color (A.P.H.A)	SM 2120 B	ND	units	1	1	15	01/23/2003	01/23/2003
Conductivity - Specific (EC)	SM 2510 B	600	μmho/cm	1	1		01/23/2003	01/23/2003
Copper (Cu)	EPA 200.8	ND	mg/L	1	0.05	1.0	01/24/2003	01/30/2003
Cyanide (CN)	SM 4500-CN-F	ND	mg/L	1	0.02	0.2	01/27/2003	01/27/2003
Dichloramine - as Cl2	SM 4500-Cl-F	ND	mg/L	1	0.1	4.0	01/22/2003	01/22/2003
Fluoride	EPA 300.0	0.30	mg/L	1	0.1		01/23/2003	01/23/2003
Hardness (as CaCO3)		160	mg/L	1	1.0		02/03/2003	02/03/2003
Hydroxide (as CaCO3)	SM 2320 B	ND	mg/L	1	1		01/23/2003	01/23/2003
Iron (Fe)	EPA 200.7	ND	mg/L	1	0.05	0.3	01/24/2003	01/28/2003
Langelier Index (Saturation Index)		0.26	-	1	N/A		02/06/2003	02/06/2003

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
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MCL: Maximum Contaminant Level
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: PQL x Dilution
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S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory.
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BSK ANALYTICAL LABORATORIES

Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

Certificate of Analysis
ELAP Certificate #1180
Report Issue Date: 02/19/2003

BSK Submission #: 2003011095

BSK Sample ID #: 285663

Project ID: Project Desc: Annual

Submission Comments:

Sample Type:	Liquid	Date Sampled:	01/22/2003
Sample Description:	Source Water	Time Sampled:	1500
Sample Comments:	Sample dated 01/21/03 0945; received sealed and split in lab.	Date Received:	01/22/2003

Inorganics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
Lead (Pb)	EPA 200.8	ND	mg/L	1	0.005	0.005	01/24/2003	02/03/2003
Magnesium (Mg)	EPA 200.7	12	mg/L	1	0.1		01/24/2003	01/28/2003
Manganese (Mn)	EPA 200.7	ND	mg/L	1	0.01	0.05	01/24/2003	01/28/2003
Mercury (Hg)	EPA 200.8	ND	mg/L	1	0.0004	0.002	01/24/2003	01/30/2003
Monochloramine as Cl2	SM 4500-Cl-F	ND	mg/L	1	0.1	4.0	01/22/2003	01/22/2003
Nickel (Ni)	EPA 200.8	ND	mg/L	1	0.01	0.1	01/24/2003	01/30/2003
Nitrate (NO3)	EPA 300.0	4.0	mg/L	1	1	45	01/23/2003	01/23/2003
Nitrite (NO2-N)	EPA 300.0	ND	mg/L	1	0.05	1.0	01/23/2003	01/23/2003
Odor	SM 2150 B	1.0	TON	1	1	3	01/23/2003	01/23/2003
pH	SM 4500-H+ B	7.7	Std. Unit	1	N/A		01/23/2003	01/23/2003
Potassium (K)	EPA 200.7	3.0	mg/L	1	2		01/24/2003	01/28/2003
Selenium (Se) - Total	EPA 200.8	ND	mg/L	1	0.002	0.005	01/24/2003	01/30/2003
Silver (Ag)	EPA 200.8	ND	mg/L	1	0.01	0.05	01/24/2003	01/30/2003
Sodium (Na)	EPA 200.7	72	mg/L	1	1		01/24/2003	01/28/2003
Sulfate (SO4)	EPA 300.0	82	mg/L	2	4	250	01/23/2003	01/23/2003
Surfactants (MBAS)	SM 5540-C	0.050	mg/L	1	0.05		01/22/2003	01/22/2003
Thallium (Tl)	EPA 200.8	ND	mg/L	1	0.001	0.002	01/24/2003	02/03/2003
Total Dissolved Solids (TDS)	SM 2540-C	360	mg/L	1	5		01/29/2003	02/04/2003
Turbidity	SM 2130 B	0.20	NTU	1	0.1	5	01/23/2003	01/23/2003
Zinc (Zn)	EPA 200.7	ND	mg/L	1	0.05	5.0	01/24/2003	01/28/2003

Organics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
1,1,1,2-Tetrachloroethane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,1,1-Trichloroethane	EPA 502.2	ND	µg/L	1.00	0.5	200	01/28/2003	01/28/2003
1,1,2,2-Tetrachloroethane	EPA 502.2	ND	µg/L	1.00	0.5	1	01/28/2003	01/28/2003
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 502.2	ND	µg/L	1.00	10	1200	01/28/2003	01/28/2003

mg/L: Milligrams/Liter (ppm)
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Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

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Organics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
1,1,2-Trichloroethane	EPA 502.2	ND	µg/L	1.00	0.5	5	01/28/2003	01/28/2003
1,1-Dichloroethane	EPA 502.2	ND	µg/L	1.00	0.5	5	01/28/2003	01/28/2003
1,1-Dichloroethene	EPA 502.2	ND	µg/L	1.00	0.5	6	01/28/2003	01/28/2003
1,1-Dichloropropene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,2,3-Trichlorobenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,2,3-Trichloropropane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,2,4-Trichlorobenzene	EPA 502.2	ND	µg/L	1.00	0.5	70	01/28/2003	01/28/2003
1,2,4-Trimethylbenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,2-Dichlorobenzene	EPA 502.2	ND	µg/L	1.00	0.5	600	01/28/2003	01/28/2003
1,2-Dichloroethane	EPA 502.2	ND	µg/L	1.00	0.5	0.5	01/28/2003	01/28/2003
1,2-Dichloropropane	EPA 502.2	ND	µg/L	1.00	0.5	5	01/28/2003	01/28/2003
1,3,5-Trimethylbenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,3-Dichlorobenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,3-Dichloropropane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
1,4-Dichlorobenzene	EPA 502.2	ND	µg/L	1.00	0.5	5	01/28/2003	01/28/2003
2,2-Dichloropropane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
2-Chlorotoluene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
4-Chlorotoluene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Benzene	EPA 502.2	ND	µg/L	1.00	0.5	1	01/28/2003	01/28/2003
Bromobenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Bromochloromethane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Bromodichloromethane	EPA 502.2	ND	µg/L	1.00	0.5	10	01/28/2003	01/28/2003
Bromoform	EPA 502.2	ND	µg/L	1.00	0.5	10	01/28/2003	01/28/2003
Bromomethane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Carbon tetrachloride	EPA 502.2	ND	µg/L	1.00	0.5	0.5	01/28/2003	01/28/2003
Chlorobenzene	EPA 502.2	ND	µg/L	1.00	0.5	70	01/28/2003	01/28/2003
Chloroethane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003

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BSK ANALYTICAL LABORATORIES

Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 02/19/2003

BSK Submission #: 2003011095

BSK Sample ID #: 285663

Project ID: Project Desc: Annual

Submission Comments:

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Sample Description:	Source Water	Time Sampled:	1500
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Organics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
Chloroform	EPA 502.2	ND	µg/L	1.00	0.5	10	01/28/2003	01/28/2003
Chloromethane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
cis-1,2-Dichloroethene	EPA 502.2	ND	µg/L	1.00	0.5	6	01/28/2003	01/28/2003
cis-1,3-Dichloropropene	EPA 502.2	ND	µg/L	1.00	0.5	0.5	01/28/2003	01/28/2003
Dibromochloromethane	EPA 502.2	ND	µg/L	1.00	0.5	10	01/28/2003	01/28/2003
Dibromomethane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Dichlorodifluoromethane	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Ethyl t-Butyl Ether	EPA 502.2	ND	µg/L	1.00	3		01/28/2003	01/28/2003
Ethylbenzene	EPA 502.2	ND	µg/L	1.00	0.5	700	01/28/2003	01/28/2003
Ethylenedibromide	EPA 502.2	ND	µg/L	1	0.5		01/24/2003	01/28/2003
Hexachlorobutadiene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Isopropylbenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Methylene chloride	EPA 502.2	ND	µg/L	1.00	0.5	5	01/28/2003	01/28/2003
Methyl-t-Butyl Ether	EPA 502.2	ND	µg/L	1.00	3		01/28/2003	01/28/2003
Naphthalene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
n-Butylbenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
n-Propylbenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
p-Isopropyltoluene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
sec-Butylbenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Styrene	EPA 502.2	ND	µg/L	1.00	0.5	100	01/28/2003	01/28/2003
t-Amyl Methyl Ether	EPA 502.2	ND	µg/L	1.00	3		01/28/2003	01/28/2003
tert-Butylbenzene	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Tetrachloroethene (PCE)	EPA 502.2	1.3	µg/L	1.00	0.5	5	01/28/2003	01/28/2003
Toluene	EPA 502.2	ND	µg/L	1.00	0.5	150	01/28/2003	01/28/2003
Total 1,3-Dichloropropene	EPA 502.2	ND	µg/L	-	N/A			
Total Trihalomethanes	EPA 502.2	ND	µg/L	-	N/A	10		
Total Xylene Isomers	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

MCL: Maximum Contaminant Level
DLR: Detection Limit for Reporting
: PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory.
See External Laboratory Report attachments

BSK ANALYTICAL LABORATORIES

Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 02/19/2003

BSK Submission #: 2003011095

BSK Sample ID #: 285663

Project ID: Project Desc: Annual

Submission Comments:

Sample Type:	Liquid	Date Sampled:	01/22/2003
Sample Description:	Source Water	Time Sampled:	1500
Sample Comments:	Sample dated 01/21/03 0945; received sealed and split in lab.	Date Received:	01/22/2003

Organics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
trans-1,2-Dichloroethene	EPA 502.2	ND	µg/L	1.00	0.5	10	01/28/2003	01/28/2003
trans-1,3-Dichloropropene	EPA 502.2	ND	µg/L	1.00	0.5	0.5	01/28/2003	01/28/2003
Trichloroethene (TCE)	EPA 502.2	1.1	µg/L	1.00	0.5	5	01/28/2003	01/28/2003
Trichloroflouromethane	EPA 502.2	ND	µg/L	1.00	5	150	01/28/2003	01/28/2003
Vinyl chloride	EPA 502.2	ND	µg/L	1.00	0.5		01/28/2003	01/28/2003
Dibromochloropropane	EPA 504.1	ND	µg/L	1	0.01	0.2	01/24/2003	01/28/2003
Ethylenedibromide	EPA 504.1	ND	µg/L	1	0.02	0.05	01/24/2003	01/28/2003
Aldrin	EPA 505	ND	µg/L	1	0.075		01/27/2003	01/28/2003
Chlordane	EPA 505	ND	µg/L	1	0.1		01/27/2003	01/28/2003
Chlorothalonil (Daconil,Bravo)	EPA 505	ND	µg/L	1	5		01/27/2003	01/28/2003
Dieldrin	EPA 505	ND	µg/L	1	0.02		01/27/2003	01/28/2003
Endrin	EPA 505	ND	µg/L	1	0.1		01/27/2003	01/28/2003
Heptachlor	EPA 505	ND	µg/L	1	0.01		01/27/2003	01/28/2003
Heptachlor epoxide	EPA 505	ND	µg/L	1	0.01		01/27/2003	01/28/2003
Hexachlorobenzene	EPA 505	ND	µg/L	1	0.5		01/27/2003	01/28/2003
Hexachlorocyclopentadiene	EPA 505	ND	µg/L	1	1		01/27/2003	01/28/2003
Lindane	EPA 505	ND	µg/L	1	0.2		01/27/2003	01/28/2003
Methoxychlor	EPA 505	ND	µg/L	1	10		01/27/2003	01/28/2003
PCBs: Arochlor Screen	EPA 505	ND	µg/L	1	0.2		01/27/2003	01/28/2003
Toxaphene	EPA 505	ND	µg/L	1	1		01/27/2003	01/28/2003
Trifluralin	EPA 505	ND	µg/L	1	1		01/27/2003	01/28/2003
2,4,5-T	EPA 515.3	ND	µg/L	1	1		01/24/2003	01/27/2003
2,4,5-TP (Silvex)	EPA 515.3	ND	µg/L	1	1		01/24/2003	01/27/2003
2,4-D	EPA 515.3	ND	µg/L	1	10		01/24/2003	01/27/2003
Bentazon (Basagran)	EPA 515.3	ND	µg/L	1	2		01/24/2003	01/27/2003
Dalapon	EPA 515.3	ND	µg/L	1	10		01/24/2003	01/27/2003
Dicamba (Banvel)	EPA 515.3	ND	µg/L	1	1.5		01/24/2003	01/27/2003

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

MCL: Maximum Contaminant Level
DLR: Detection Limit for Reporting
: PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

BSK ANALYTICAL LABORATORIES

Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 02/19/2003

BSK Submission #: 2003011095

BSK Sample ID #: 285663

Project ID: Project Desc: Annual

Submission Comments:

Sample Type:	Liquid	Date Sampled:	01/22/2003
Sample Description:	Source Water	Time Sampled:	1500
Sample Comments:	Sample dated 01/21/03 0945; received sealed and split in lab.	Date Received:	01/22/2003

Organics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
Dinoseb (DNBP)	EPA 515.3	ND	µg/L	1	2		01/24/2003	01/27/2003
Pentachlorophenol (PCP)	EPA 515.3	ND	µg/L	1	0.2		01/24/2003	01/27/2003
Picloram	EPA 515.3	ND	µg/L	1	1		01/24/2003	01/27/2003
3-Hydroxycarbofuran	EPA 531.1	ND	µg/L	1	3		02/04/2003	02/04/2003
Aldicarb	EPA 531.1	ND	µg/L	1	3		02/04/2003	02/04/2003
Aldicarb Sulfone	EPA 531.1	ND	µg/L	1	4		02/04/2003	02/04/2003
Aldicarb Sulfoxide	EPA 531.1	ND	µg/L	1	3		02/04/2003	02/04/2003
Carbaryl	EPA 531.1	ND	µg/L	1	5		02/04/2003	02/04/2003
Carbofuran	EPA 531.1	ND	µg/L	1	5	18	02/04/2003	02/04/2003
Methomyl	EPA 531.1	ND	µg/L	1	2		02/04/2003	02/04/2003
Oxamyl	EPA 531.1	ND	µg/L	1	20	200	02/04/2003	02/04/2003
Glyphosate	EPA 547	ND	µg/L	1	25	700	01/28/2003	01/28/2003
Endothall	EPA 548.1	ND	µg/L	1	45		01/27/2003	01/31/2003
Diquat	EPA 549.1	ND	µg/L	1	4	20	01/24/2003	01/28/2003
Dibromoacetic Acid	EPA 552.2	ND	µg/L	1	1.0		01/25/2003	01/29/2003
Dichloroacetic Acid	EPA 552.2	ND	µg/L	1	1.0		01/25/2003	01/29/2003
Monobromoacetic Acid	EPA 552.2	ND	µg/L	1	1.0		01/25/2003	01/29/2003
Monochloroacetic Acid	EPA 552.2	ND	µg/L	1	2.0		01/25/2003	01/29/2003
Total Haloacetic Acids	EPA 552.2	ND	µg/L	-	N/A	60	02/02/2003	02/02/2003
Trichloroacetic Acid	EPA 552.2	ND	µg/L	1	1.0		01/25/2003	01/29/2003
Diuron	EPA 632	ND	mg/L	1	0.001		01/27/2003	01/30/2003

Surrogate

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
1-Chloro-2-fluorobenzene	EPA 502.2	86	% Rec	1.00	0		01/28/2003	01/28/2003
Bromoform	EPA 504.1	92.5	% Rec	1	N/A		01/24/2003	01/28/2003
Tetrachloro-m-xylene	EPA 505	110	% Rec	1	N/A		01/27/2003	01/28/2003
DCPAA	EPA 515.3	99	% Rec	1	N/A		01/24/2003	01/27/2003

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

MCL: Maximum Contaminant Level
DLR: Detection Limit for Reporting
: PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
B: Analysis performed by External laboratory.
See External Laboratory Report attachments.

BSK ANALYTICAL LABORATORIES

Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 02/19/2003

BSK Submission #: 2003011095

BSK Sample ID #: 285663

Project ID: Project Desc: Annual

Submission Comments:

Sample Type: Liquid
Sample Description: Source Water
Sample Comments: Sample dated 01/21/03 0945; received sealed and split in lab.

Date Sampled: 01/22/2003
Time Sampled: 1500
Date Received: 01/22/2003

Organics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
BDMC	EPA 531.1	105	% Rec	1	N/A		02/04/2003	02/04/2003
AMPA	EPA 547	138.1	% Rec	1	N/A		01/28/2003	01/28/2003
2,3-Dibromopropionic Acid	EPA 552.2	120	% Rec	1	N/A		01/25/2003	01/29/2003
Benthiocarb	EPA 632	80	% Rec	1	N/A		01/27/2003	01/30/2003

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

MCL: Maximum Contaminant Level
DLR: Detection Limit for Reporting
: PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory.
See External Laboratory Report attachments.

BSK ANALYTICAL LABORATORIES

Todd Ouwehand
Rocky Mountain Water
10260 Matern Place
Santa Fe Springs, CA 90670

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 02/26/2003

BSK Submission #: 2003021210

BSK Sample ID #: 294980

Project ID: Project Desc:

Submission Comments:

Sample Type:	Liquid	Date Sampled:	02/21/2003
Sample Description:	Source Water	Time Sampled:	0700
Sample Comments:		Date Received:	02/21/2003

Inorganics

Analyte	Method	Result	Units	Dilution	DLR	MCL	Prep Date	Analysis Date
Bromate (BrO_3) with Ag/Ba Clean Up	EPA 300.1	ND	mg/L	1	0.005	0.01	02/25/2003	02/25/2003

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

MCL: Maximum Contaminant Level
DLR: Detection Limit for Reporting
: PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory.
See External Laboratory Report attachments.

P-111

Monthly Produ   n Summary (Acre-feet)

Fiscal Year 2002-03

4116 Rocky Mountain Industries, Inc.

		July	August	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	Total To-da
3S/11W-06C03S	1909844	4.47	5.27	4.94	3.01	3.18	3.44	4.16	3.70	3.68	4.15	3.86	2.88	46
	Total	4.47	5.27	4.94	3.01	3.18	3.44	4.16	3.70	3.68	4.15	3.86	2.88	46

Note: Blanks indicate well was not active during that month

LA COUNTY DEPARTMENT OF PUBLIC WORKS
GROUNDWATER DATA

Post-it* Fax Note 7671

Date 8/6/03	# of pages ▶
To Tom Titus	From Hydrologic Records
Co./Dept. CDM	Co. LA-CDPW
Phone # (949) 752 5452	Phone # (626) 458 6120
Fax # (949) 752 1307	Fax # (626) 979 5436

well no.	date	depth	g.s. elev	status
1626X	N/A			inactive
1604AB	12-Dec-00	91.50	141.00	active
	30-Apr-02		141.00	
	14-May-02	90.00	141.00	
	12-Dec-02	95.00	141.00	
1605L	N/A			inactive
1617N	03/14/2001	65	117	inactive
1617K	03/14/2001	87.3	116	inactive
1606U	14-Mar-01	72.00	115.50	active
	28-Oct-01	105.00	115.50	
	28-Apr-02	96.00	115.50	
	31-Oct-02	104.00	115.50	
1585A	10-Apr-01	73.60	126.60	active
	15-Apr-01	81.60	126.60	
	15-May-02	77.60	126.60	
	15-Nov-02	89.60	126.60	
	02-Dec-02	89.60	126.60	
1596H	10-Apr-01	75.70	124.20	active
	15-Apr-01	82.70	124.20	
	15-May-02	82.70	124.20	
	15-Nov-02	84.70	124.20	
	02-Dec-02	84.70	124.20	
1626A	N/A (3S11W06N02)			inactive

* We only have information on the wells with a DPW ID. For the other wells please contact the State Water Resources or information. Some County wells do not have measurement information from years 2001-2003.

FLOOD CONTROL RICT
Water Conservation Division
WELL DATA

Owner: LITTLE LAKE CEMETARY
#11959 Lakeland Rd, Norwalk

Location and Description: In Little Lake Cementery; 0.14 mi. north of Lakeland Rd; 0.25 mi. west of Norwalk Blvd.; 50± west of utility garage and home; in small pumphouse structure.

Use: Irrigation

Elev. of average grd. at well: 127±' U. S. G. S. Datum

Elev. of grd. adjacent to well: U. S. G. S. Datum

Water surface reference points:

(a) From 12-28-67 To Elev. 128.0 How det. Topo.
Description: Top of 2" cap (N.W. Corner pumpbase), 1.0' above grd.

(b) From To Elev. How det.
Description:

(c) From To Elev. How det.
Description:

(d) From To Elev. How det.
Description:

Type of well: Size 12"–650'

Original depth: 650' Soundings:

Pumping equipment: 25H.P. G.E. Motor

Power used: Elec.

Capacity: Drawdown:

Date drilled: 2-15-52 By

Artesian characteristics:

Quality of water:

Remarks:

(over)

Well Numbers

Owner

D. W. R. No.

38/ D. W. R. Lo. 1141-6NI

F.C. 1626X

Water Conservation Divi[illegible]

WELL DATA

Owner: City of Pico Rivera

Location and Description: Pico Rivera
120'± N.E. of N.E. Curb of Telegraph Rd.
140'± N.W. of ℄ Clarinda Ave.
185'± S.E. of ℄ Klinedale Ave.

Use: Public Supply

Elev. of average grd. at well: 141 ± U.S.G.S. Datum

Elev. of grd. adjacent to well: U.S.G.S. Datum

Water surface reference points:

(a) From 10-18-78 To Elev. 142.0 How det. Topo
Description: Air Gage 1' above Grd.

(b) From To Elev. How det.
Description:

(c) From To Elev. How det.
Description:

(d) From To Elev. How det.
Description:

Type of well: Size

Original depth: Soundings:

Pumping equipment:

Power used:

Capacity: Drawdown:

Date drilled: By

Artesian characteristics:

Quality of water:

Remarks: Formerly owned by Park Water Co., was their #2-E

(over)

Numbers	Owner				D.W.R. No.	D.W.R. Loc.
	Telegraph #1					

LOG OF WELL NO.

FROM	TO	CLASSIFICATION OF MATERIALS	FROM	TO	CLASSIFICATION OF MATERIALS

...ons 277-290; 565-584

...ater at

...el before perf. after perf.

(over)

ter Conservation Division
WELL DATA

Owner: 1- Suburban Water Systems*
2. City of Santa Fe Springs-11-1-68

Location and Description: #11130 Idalene St. Santa Fe; 100' So. ℄ of Idalene St; 200' E. ℄ of Jessup Drive; in concrete pit; 290±' E'ly of owners well 309W-1, 1605F

Use: 1-Public Supply. 2- Municipal Supply

Elev. of average grd. at well: 126±' - Topo. U. S. G. S. Datum

Elev. of grd. adjacent to well: U. S. G. S. Datum

Water surface reference points:

(a) From 7-15-63 To Elev. 127.0' How det. Topo.
Description: 2" pipe, 1.0' above grd.

(b) From To Elev. 128.0 How det.
Description: Direct reading airgage in feet 2' above ground, located in control house

(c) From To Elev. How det.
Description:

(d) From To Elev. How det.
Description:

Type of well: Size 16"

Original depth: 1052' Soundings:

Pumping equipment:

Power used: Elec.

Capacity: Drawdown:

Date drilled: 2-1-63 By Water Well Supply

Artesian characteristics:

Quality of water:

Remarks: Loc.-desc. from field - 9-30-63

(over)

Numbers | Owner 309W-2* | | | D.W.R. No. 3S/12W-1E? | D.W.R. Loc. | F.C. 1105L

FROM	TO	CLASSIFICATION OF MATERIALS	FROM	TO	CLASSIFICATION OF MATERIALS

Perforations 870' – 890'. } owner 9-11-63
930' – 1000".

Struck water at

Water level before perf. after perf.

Remarks Well log & other data in Confidential
Well Log Files – 10-8-63

(over)

12052

1617N

FORM 104 REV. 8-48 SHEET 1

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
HYDRAULIC DIVISION
WELL DATA

Owner: ~~EXCELSIOR WATER Co.~~ Southern Calif Water Co.

Location and Description: GET KEY AT OFFICE - #12105 VOLUNTEER AVE, NORWALK. WELL 150' E. ℄ OF PIONEER BLVD, 60' So. OF 11502 PIONEER BLVD. - 0.3 MILES So. OF LAKELAND RD. IN NORWALK VILLAGE. EAST WELL OF 2 WELLS

Use: PUBLIC SUPPLY

Elev. of average grd. at well: 117± U.S.C.&S. Datum

Elev. of grd. adjacent to well: U.S.C.S. Datum

Water surface reference points:

(a) From 9-12-51 To 12-9-52 Elev. 118.0 How det. TOPO.
Description: TOP OF 2" CAPPED PIPE 1' ABOVE GRD.

(b) From 12-9-52 To Elev. 119.0 How det. TOPO
Description: Air gage 2' above ground

(c) From To Elev. How det.
Description:

(d) From To Elev. How det.
Description:

Type of well: Size 14"

Original depth: 565' Soundings:

Pumping equipment:

Power used: 60 H.P. ELECTRIC

Capacity: Drawdown:

Date drilled: AUG 30 1949 By

Artesian characteristics:

Quality of water:

Remarks:

(over)

Well Number

Owner

Pioneer #2

S.W.R. 3S/11W-7E2

Loc. D.W.R.

F.C. 1617N

1617N_1

WRD # 200245

SCWC

LOG OF WELL NO. 1617N

FROM	TO	CLASSIFICATION OF MATERIALS	FROM	TO	CLASSIFICATION OF MATERIALS
0	12	Topsoil			
	24	Blue clay - sticky			
	31	Yellow clay			
	33	Blue sand & gravel - clay			
	44	Blue clay sandy			
	51	Blue sand & gravel - clay			
	59	Blue clay - sandy			
	62	Yellow clay - sandy			
	64	Yellow sand & gravel			
	90	Yellow clay - sandy			
	148	Yellow clay solid 108 to 114'	Cemented formation Sandstone		
	153	Brown sand			
	157	Yellow clay - sandy			
	162	Gray clay - sandy			
	167	Brown sand			
	188	Yellow clay			
	194	Yellow sand gravel - muddy			
	206	Yellow sand gravel		CUT	
	213	Coarse blue sand, some gravel			
	228	Brown clay - sandy			
	233	Yellow clay - some small gravel			
	241	Yellow clay			
	275	Blue clay			
	279	Muddy sand - blue			
	323	Blue clay			
	328	Coarse blue sand			
	354	Some fine gravel			
	377	Blue clay - tough - sandy			
	456	Blue clay - solid			
	472	Coarse sand, gravel - blue			CUT
	479	Coarse blue sand - muddy			
	480	Coarse sand & gravel			
	495	Coarse blue sand - muddy			
	521	Blue clay			
	529	Gray clay			
	565	Blue clay			

Perforations 196'-206', 460-472, 8 CUTS TO A CIRCLE, 1 CIRCLE EVERY 8", 3/16" x 2 1/2" CUTS 35 CIRCLES, 280 CUTS.

Struck water at 65'

Water level before perf. ______ after perf. ______

Remarks ______

(over)

1617K

F.D. DIST. FORM 108 REV. 3M 11-47

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
HYDRAULIC DIVISION
WELL DATA

SHEET 1

WRD # 200319

Owner: O'Connell, Southern California Water Co.

Location and Description: 50' W. E Pioneer Blvd & ~~.25~~ Mile South of Lakeland Rd; at #11429 So. Pioneer Norwalk

Use: (~~Farm~~) Public Supply (Supply)

Elev. of average grd. at well: ~~118~~ 116 ±' U.S.G.S. Datum

Elev. of grd. adjacent to well: U.S.G.S. Datum

Water surface reference points:

(a) From 9-25-52 To Elev. ~~119~~ 117.0 How det. Topo.
Description: 1" hole in pump base (North side), 1' above ground

(b) From 4-24-54 To Elev. 115.7 How det. TOPO.
Description: E airgage, 0.3' below ground

(c) From 4-24-54 To Elev. 113.0 How det. TOPO.
Description: 2" pipe, 0.2' above plate & 1.0' below ground

(d) From To Elev. How det.
Description:

Type of well: Size 12" 13" OD

Original depth: ~~296~~ 252' Soundings:

Pumping equipment:

Power used: Elec.

Capacity: Drawdown:

Date drilled: By

Artesian characteristics:

Quality of water:

Remarks: office 12151 1/2 Firestone Blvd. Norwalk
Meas. obtained from So. Cal. Water Co.

(OVER)

Well Numbers | Owner: Pioneer #3 | D.W.R. 3S/12W-12A2 Loc. | D.W.R. | F.C. 1617K

1617K_1

LOG OF WELL NO. 1617 K

FROM	TO	CLASSIFICATION OF MATERIALS	FROM	TO	CLASSIFICATION OF MATERIALS
0	20	Top soil			
20	33	Blue clay			
33	52	Sand & large blue gravel			
52	78	Soft sandy clay			
78	91	yellow sand			
91	101	soft sandy clay			
101	110	hard yellow clay			
110	128	mushy sand yellow mud			
124	137	soft yellow clay			
137	149	fine muddy yellow sand			
149	153	fine sand			
153	165	fine sand, few small gravel			
165	173	yellow clay			
173	178	cemented conglomerate			
178	188	soft ~~sandy~~ mushy clay			
188	213	sand & gravel #1			
213	218	sand & gravel #2			
218	225	hard brown clay			
225	248	soft sandy clay & gravel			
248	252	blue sandy clay			

Perforations 194-718

Struck water at

Water level before perf. after perf.

Remarks

(OVER)

SCWC

WRD # 200319

1606U

C4 11-53

SHEET 1

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
HYDRAULIC DIVISION
WELL DATA

Owner: Southern California Water Company

Location and Description: 150' S. of ℄ of Cecilia St
100' W. of ℄ of Studebaker Road

11209 Studebaker Rd.

Use: ~~Domestic~~ Public Supply

Elev. of average grd. at well: 115.5 U.S.C.S. Datum

Elev. of grd. adjacent to well: U.S.C.S. Datum

Water surface reference points:

(a) From To Elev. 117.5 How det. Topo
Description: 1' above base or 2' above ground surface
Air gage (air line enters 2" meas. Pipe)

(b) From To Elev. 116.0 How det. Topo
Description: Top of capped 8" pipe N. side pump base
0.5' above ground.

(c) From To Elev. How det.
Description:

(d) From To Elev. How det.
Description:

Type of well: 385' DWR
336' lined
Size 14"
12"

Original depth: 391 Soundings:

Pumping equipment: Layne & Bowler
40 H.P. Electric Ser. No. 803686

Power used: Electric

Capacity: Drawdown:

Date drilled: 1-10-51 - DWR By

Artesian characteristics:

Quality of water:

Remarks:

(over)

Well Numbers
Owner's Number: Hemmey #2
D.W.R.: 3S/12W-26L
Loc. D.W.R.
F.C. 1606U

1606U_1

LOG OF WELL NO.

FROM	TO	CLASSIFICATION OF MATERIALS	FROM	TO	CLASSIFICATION OF MATERIALS

Perforations 193-198 277-279 336-364

Struck water at

Water level before perf. after perf.

Remarks Well log & other data in confidential file

(over)

1585A

76W4A0 (05 REV OB 11-53 SHEET 1

* City of Downey 12-5-78

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
HYDRAULIC DIVISION
WELL DATA

Owner: * Park Water Co
DWR → 4206 E. Rosecrans, Compton

Location and Description: #10100 S. Haledon Ave; 68' W of ℄ Haledon Ave; 186' S of ℄ Otto St. Est. 300' N of ℄ Florence Ave

Use: Public Supply

Elev. of average grd. at well: 129 ±' 126.6 -n.i.(s) U.S.G.S. Datum

Elev. of grd. adjacent to well: U.S.G.S. Datum

Water surface reference points:

(a) From 4-27-53 To Elev. 130.0 How det. Topo.
Description: Air gage, 1.0' above ground

(b) From 4-27-53 To Elev. 129.5 How det. Topo.
Description: 2" capped pipe 0.5' above ground

(c) From 8-10-79 To Elev. 127.6 How det. Diff. Levels 4-20-77
Description: Top of 2" pipe (W. Side) with air filter removed (1' S. of Pump) 0.4' above pump base floor, 1' above ground

(d) From To Elev. How det.
Description:

Type of well: Size 16"

Original depth: 650' Soundings:

Pumping equipment: 150 HP US Motor # 924415

Power used: Electric

Capacity: Drawdown:

Date drilled: 7-1-53-D.W.R. Oct. 1952 By Water Well Supply

Artesian characteristics:

Quality of water:

Remarks: Length of air line 180'

(over)

Well Number: Owner # 42C; Name 10 #; L.W.R. Pilcher 3581; L.W.R.; F.C. 1585A

Downey # 10

WRD # 200132

1585A_1

LOG OF WELL NO. 1585A

FROM	TO	CLASSIFICATION OF MATERIALS	FROM	TO	CLASSIFICATION OF MATERIALS
0	18	Top soil	594	644	Yellow clay
18	31	Yellow clay	644	650	Blue clay.
31	42	Yellow sand & clay ball			
42	52	Blue clay			
52	64	Blue sand & gravel.			
64	78	Yellow sand & gravel, tight			
78	92	Yellow sand & gravel			
92	118	Grey clay, hard.			
118	134	Yellow sand & gravel			
134	180	Grey sandy clay			
180	204	Yellow sand clay.			
204	226	Yellow clay hard.			
226	239	Yellow clay, small gravel			
239	280	Yellow sand & grave			
280	298	Yellow sand & small gravel, muddy.			
298	310	Yellow clay, small gravel.			
310	350	Yellow clay			
350	378	Yellow clay & small gravel, hard			
378	402	Yellow sand & gravel, hard.			
402	412	Yellow clay & gravel			
412	448	Yellow clay.			
448	453	Yellow sand & gravel small, tight.			
453	462	Yellow sand & gravel.			
462	532	Yellow sandy clay.			
532	544	Blue clay.			
544	570	Yellow clay.			
570	584	Yellow clay & small gravel.			
584	594	Sand, small gravel, clay balls, muddy.			

Perforations 380' to 403'; 455-463; 600-619
Cuts 3/8"x 3" Mills knife, 8 cuts per circle, 1 circle every 8"

Struck water at

Water level before perf. ______ after perf. 102'

Remarks Well log & other data in confidential well log file.

(over)

Downey
#10

1596H

SHEET 1

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
HYDRAULIC DIVISION
WELL DATA

* CITY OF DOWNEY 12-5-78

Owner: * Park Water Co.

Location and Description: 250' S. of Florence Co.; 50' E. of Lesterford Ave.; # 10224 So. Lesterford Ave.; 300' S. of Florence Ave.; 100' E. of Lesterford Ave.

Use: public supply

Elev. of average grd. at well: U.S.G.S. Datum.

Elev. of grd. adjacent to well: 119.5± 124.2 U.S.G.S. Datum

Water surface reference points:

(a) From 5-16-50 To Elev. 120.5' How det. Topo.
Description: Air gage, 1.5' above ground calibrated to top of pump base 1' above ground

(b) From To Elev. 120.5 How det. Topo.
Description: Top, capped 2" pipe of pump base, 1' above ground (N. side of pump base)

(c) From 8-11-79 To Elev. 124.6 How det. Dig. Levels 7-10-79
Description: Top of 1½" plastic pipe (with filter removed) at N. side of 32.7 conc. base approx 0.4' above the

(d) From To Elev. How det.
Description:

Type of well: Size 16"

Original depth: 444' Soundings:

Pumping equipment: Serial #862316 Automatic 100 H.P.

Power used: Electric

Capacity: 2100 gpm Drawdown:

Date drilled: May 1950 By Water Well Supply Co.

Artesian characteristics:

Quality of water:

Remarks: air line 164'
Location field checked E.S.B. 1-9-56

(over)

Well Number
Owner 408
Name # 12
T.C. 1596 H

Downey #12

1596H_1

LOG OF WELL NO. 1596H

FROM	TO	CLASSIFICATION OF MATERIALS	FROM	TO	CLASSIFICATION OF MATERIALS
0	12	Soil			
12	20	Blue clay			
20	58	Grey sand			
58	123	Yellow sand & gravel			
123	168	Sandy grey clay			
168	186	Grey sand			
186	199	Grey sand & gravel			
199	212	Yellow sand & gravel			
212	215	Yellow sand & gravel & clay			
215	228	Sandy yellow clay			
228	260	Yellow clay			
260	271	Sandy yellow clay			
271	284	Yellow sand some gravel			
284	298	Yellow clay			
298	305	Yellow sand & gravel			
305	312	Yellow clay			
312	352	Yellow sand & gravel			
352	444	Sandy yellow clay			

Perforations 301-305'; 316-352', 8 holes to a circle 1 circle every 9 inches

Struck water at

Water level before perf. after perf. 69'

Remarks tested May 16, 1950 [illegible] 68' [illegible] level 99'

(over)

1596H

Downey #12

FLOOD CONTROL [illegible] UCT

HYDROGRAPHIC DEPA[illegible] MENT

WELL DATA

Location and description 90' S. of (Florence Ave / ~~Little Lake Rd.~~);

800' W. of Little Lake School in open

\#11854 FLORENCE AVE;

pumphouse; 500 ft East of Pioneer Blvd

Description of reference point (a) Top of casing at ground

surface (b) [illegible] "cap screw hole N.E side of pump base [illegible] Remove cap screw. Elev [illegible] higher than R.P.

R. P. elev. above sea level (d) ~~127~~ 130.84 → Levels [illegible] Datum U.S.G.S.

(b) 131.55

How Determined → Topog map.

R. P. elev. above, below, ground 0

Owner ~~[illegible]~~ Knute B. Norswing J.E. Hathaway [illegible]

3 acres

Use formerly irrigation - not being used acct. oil field pollution

Capacity of well

Depth of well ~~127~~ 226'

Size of well ~~12"~~ 10" Type Drilled

Power used Electric

Type of motor, ~~engine~~ U.S. Motors #89N-99 25HP Make ~~[illegible]~~ H.P. 25

Type of pump Deep well Make Acme

Capacity of pump

Year drilled or dug ~~1921~~ 1/10/21 Driller Thompkins

Depth to water when drilled

Salinity of water

Temperature of water

Artesian when drilled Yes No

Artesian on date Yes No

Drilled by THOMPKINS

Date drilled 1/10/24

Depth from ground surface

... water at ... ft. from ground.

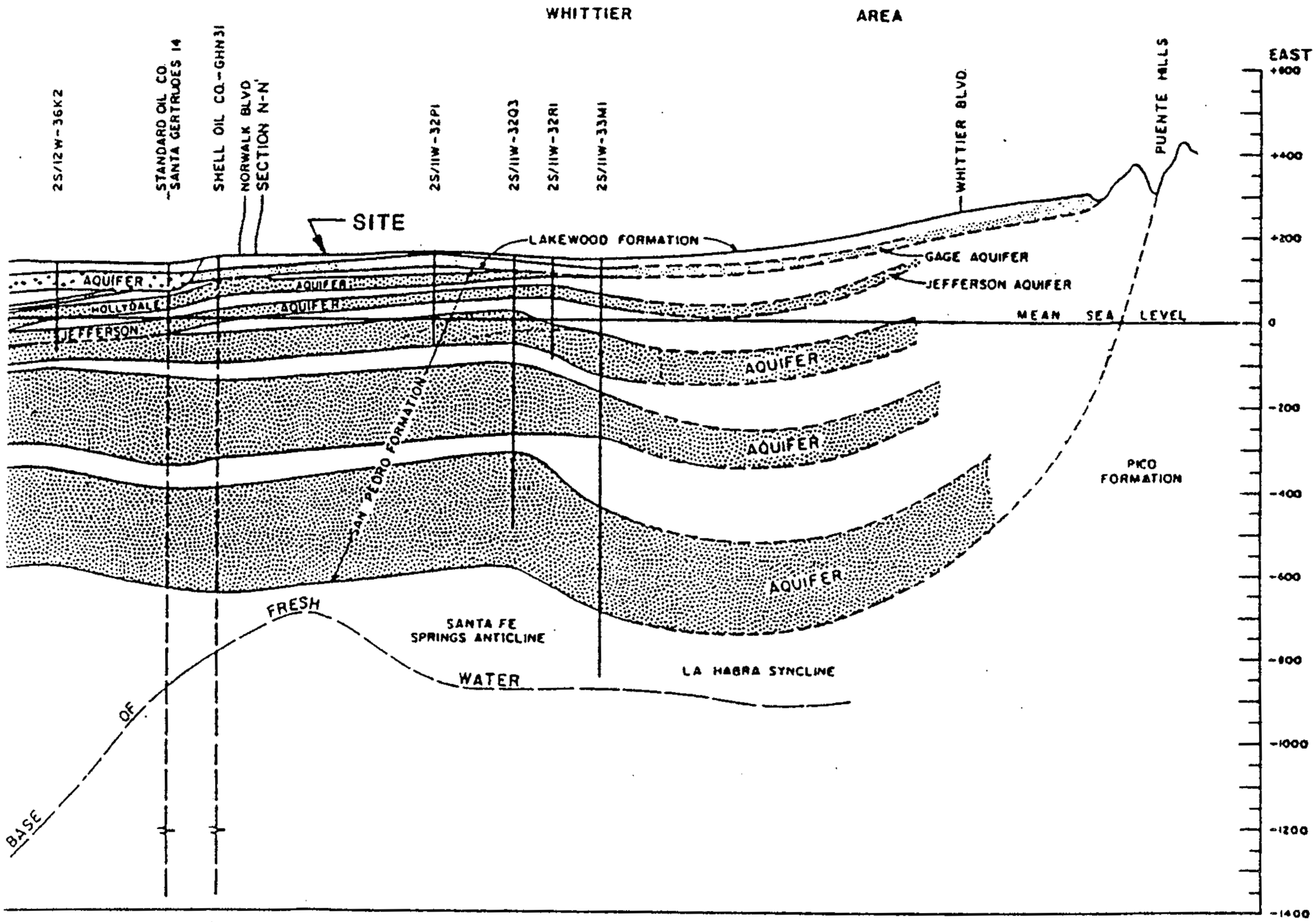
... rose to ... ft. from ground.

To	CLASSIFICATION OF MATERIALS		
31	Sand & soil	199	Clay
77	Sand	207	Gravel - out
81	Clay	211	Sand
93	Sand	215	Clay
101	Fine gravel - out	224	Sand
111	Clay	226	Clay
123	Packed sand		
127	Fine gravel		
129	Sand		
153	Clay		
166	Gravel - out		
173	Clay		
183	Sand		
191	Coarse sand - out		
[illegible]	Sand		

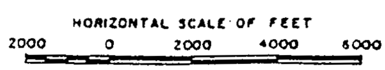
Perforations 93 - 101
153 - 166
183 - 191
199 - 207

Above log from HATHAWAY Papers, Water Well Supply

Appendix D
Boring Logs and Cross-Sections



MODIFIED FROM: 1961, DWR BULLETIN NO. 104, PLANNED UTILIZATION OF THE GROUND WATER BASINS OF THE COASTAL PLAIN OF LOS ANGELES COUNTY

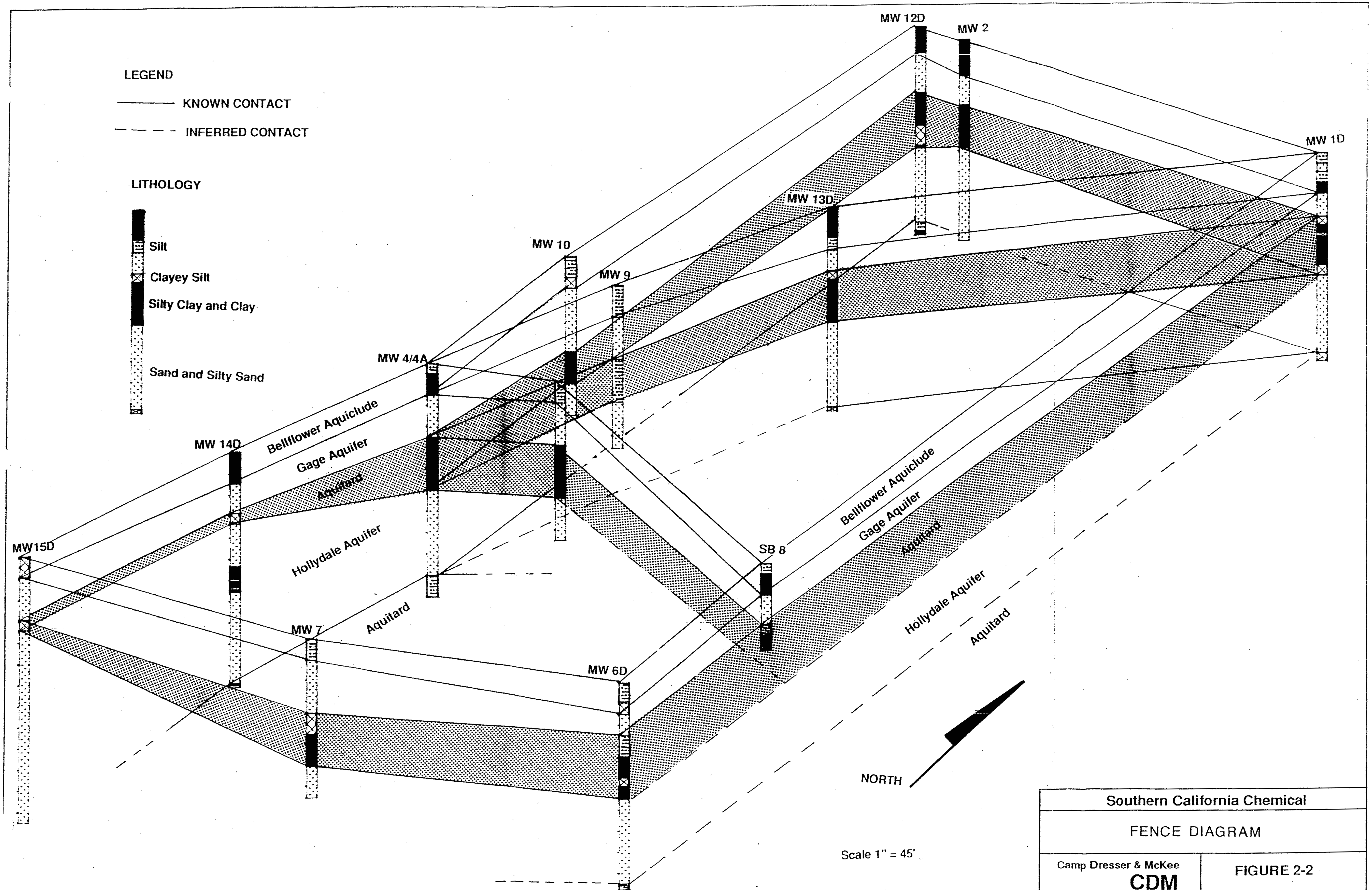


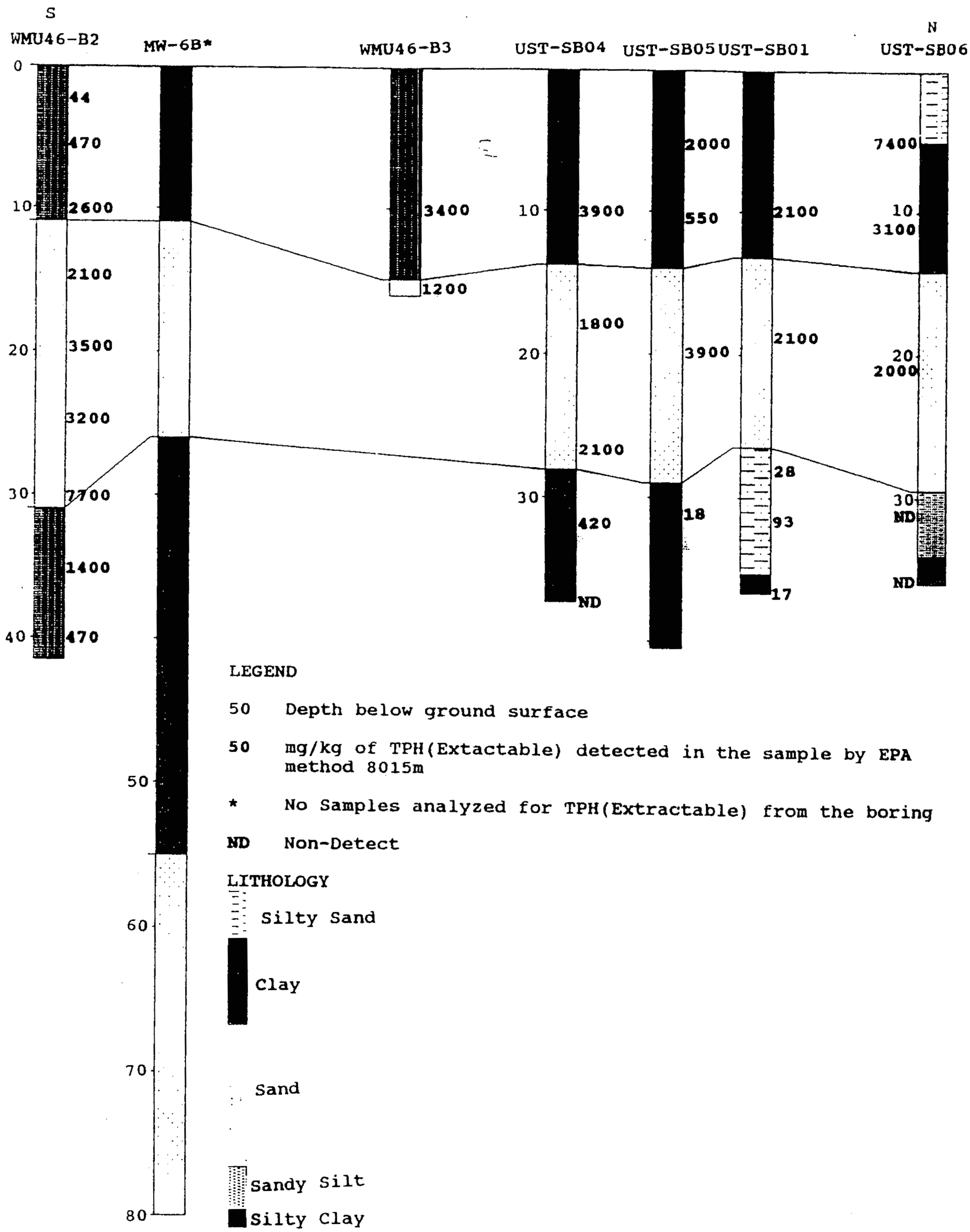
SOUTHERN CALIFORNIA CHEMICAL

EAST / WEST REGIONAL GEOLOGIC CROSS SECTION

Camp Dresser & McKee **CDM**

FIGURE 2-1

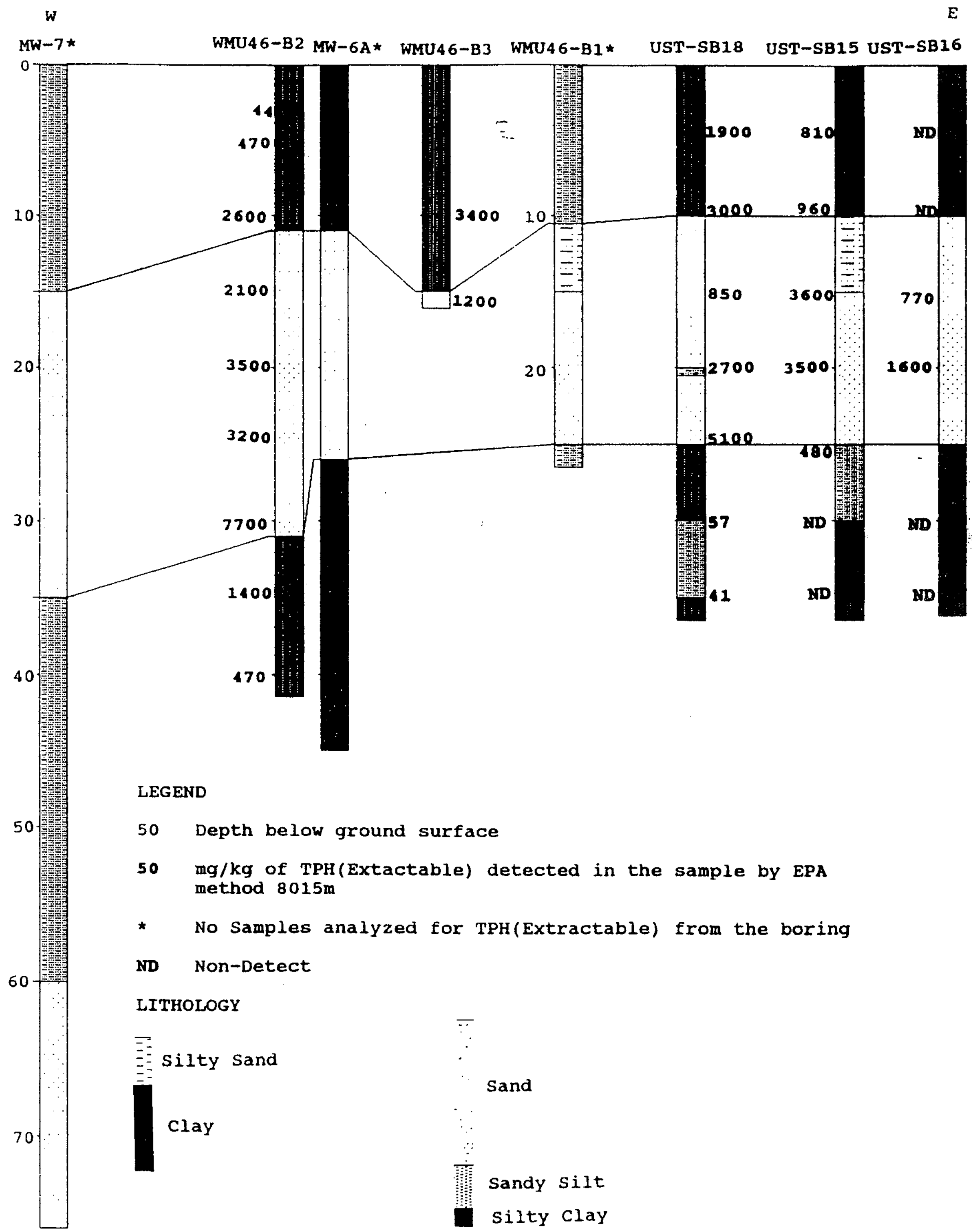

LEGEND
KNOWN CONTACT
INFERRED CONTACT
LITHOLOGY
Silt
Clayey Silt
Silty Clay and Clay
Sand and Silty Sand
MW 12D
MW 2
MW 1D
MW 13D
MW 10
MW 9
MW 4/4A
MW 14D
MW15D
MW 7
MW 6D
SB 8
Bellflower Aquiclude
Gage Aquifer
Aquitard
Hollydale Aquifer
Aquitard
Bellflower Aquiclude
Gage Aquifer
Aquitard
Hollydale Aquifer
Aquitard
NORTH
Scale 1" = 45'
Southern California Chemical
FENCE DIAGRAM
Camp Dresser & McKee
CDM
FIGURE 2-2



Southern California Chemical

NORTH - SOUTH CROSS SECTION

Camp Dresser & McKee **CDM**	FIGURE 6-2



Southern California Chemical

EAST - WEST CROSS SECTION

Camp Dresser & McKee CDM	FIGURE 6-3

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client: Southern California Chem. Site: Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. BG-2

Drill Contractor: Beylik Drilling Method: Hollow Stem Auger - 8" Diam. Date Drilled: 1-18-91

Piez/Casing Size & Type: ______ Screened Length/Interval: ______ Total Depth: 41'

Field Geologist/Technician: BG, FW PID: X FID: ______ Casing Elevation: ______ Water Table Depth: ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 0.8 **SANDY SILT** - red brn, minor rock to1/2 ", fill material.		ML	NEAT CEMENT BACKFILL					40,40, 30	0.8/1.5
5	0.0 - 1.2 **SANDY SILT** - med brn, v slightly plastic, slight clay.		ML					0	7,10, 12	1.2
10	0.0 - 1.3 **SAND** - lt brn, v fine to med, mostly med, mod sort, damp, ang to subrnd.		SP					13	20,22, 30	1.3
15	0.0 - 1.3 **SAND** - as above.		SP					3	32,75, 105	1.3
20	0.0 - 1.3 **SAND** - as above.		SP					11	58,128, 125	1.3
25	0.0 - 1.5 **SANDY SILT** - brn, damp, nonplastic.		ML					13	7,29, 53	1.5
30	0.0 - 1.5 **SILTY CLAY** - med brn, silty, plastic, damp.		CL					10	30,46, 76	1.5
35	0.0 - 1.5 **SILTY CLAY** - brn, slightly plastic, damp, heavy cream colored mottling.		CL					2	20,79, 141	1.5
40	**SILTY CLAY** - as above		CL					19	17,32, 92	1.5

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. BG-2
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 1-18-91
Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'
Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - as above.		CL	NEAT CEMENT BACKFILL				19	17,31, 92	1.5/1.5
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. FeCl SB1
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-17-90
Piez/Casing Size & Type NA Screened Length/Interval NA Total Depth 12'
Field Geologist/Technician BG/FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 0.3 **SILT** - brn, loose, v dry. 0.3- 1.3 **CLAYEY SILT** - dk brn, reddish mottling, very hard.		ML ML	NEAT CEMENT BACKFILL				3	8, 9, 29, 75	1.3/ 2.0
	CLAYEY SILT - reddish dk brn, increased clay, v hard.		ML					1	25, 25, 25, 25	1.7
5	**CLAYEY SILT** - med brn, reddish and v dk brn mottling, white lime like spots to 1/2".		ML					11	sluff, 12, 16, 20	1.3
	CLAYEY SILT - med brn, v slightly plastic, dry, mod hard, minor white material in shoe.		ML						12, 16, 20, 26	1.5
10	0.0 - 0.9 **SILTY CLAY** - same as above. 0.9 - 1.8 **SILTY SAND** - med brn, v fine to fine, damp, v minor white material, rnd to subrnd, mod sorted.		ML SM					0	8, 9, 12, 13	1.8
	SILTY SAND - same as above.		SM						9, 12, 15, 15	
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. FeCl SB2

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-14-90

Piez/Casing Size & Type NA Screened Length/Interval NA Total Depth 12'

Field Geologist/Technician FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med dk brn w/ white splotches, sand and gravel porton, mostly dry.		CL	NEAT CEMENT BACKFILL				14	9,12, 18, 21	1.8/ 2.0
	POOR RECOVERY - concrete chunk.	?						0	7, 8, 8, 9	NA
5	**SILTY CLAY** - dk brn w/ minor white splotches, v slightly damp, v fine sand portion.		CL						6, 8, 11, 13	1.8
	SILTY CLAY - same as above except med brn, no white, slightly plastic, no visible contamination.		CL					1	6, 8, 11, 13	1.8
10	**SILTY CLAY** - same as above.		CL					0	9, 12, 13 for 1.5	1.3
	SILTY CLAY - same as above.		CL					0	7, 7, 9, 11	1.7
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. FeCl SB3

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-14-90

Piez/Casing Size & Type NA Screened Length/Interval NA Total Depth 12'

Field Geologist/Technician FW PID X FID Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, slightly plastic, slightly damp.		CL	NEAT CEMENT BACKFILL				7	11, 21, 25, 56	1.7/ 2.0
	SILTY CLAY - med dk brn; w/ white, dk and yellow splotches, hard, mostly dry, crumbles.		CL					34	25, 40 45	1.2
5	**SILTY CLAY** - some gravel, med brn w/ white splotches, same as above.		CL					18	45, 40 45, 50	1.5
	SILTY CLAY - med brn, mostly dry, blocky.		CL					3	45, 40, 75	1.4
10	**SILTY SAND** - med red brn, some rust color, flakey, mostly dry, v fine to fine sand.		SM					0	35, 65, 75	1.4
	SILTY SAND - same as above.		SM						50, 65, 85	1.8
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. FeCl SB4
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-14-90
Piez/Casing Size & Type NA Screened Length/Interval NA Total Depth 20'
Field Geologist/Technician FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, v slightly damp, slightly plastic, v fine sand portion.		CL	NEAT CEMENT BACKFILL				3	7, 9, 12, 15	1.8/ 2.0
	SILTY CLAY - same as above but w/ white & black splotches.		CL					15	25, 19, 18,17	1.8
5	**SILTY CLAY** - same as above.		CL					16	7, 12, 13, 11	1.5
	SILTY CLAY - same as above except med brn, no white, slightly plastic, no visible contamination.		CL						3, 4, 4	1.2
10	**SILTY CLAY** - same as above.		CL					0	4, 4, 6, 10	1.8
	Not Recorded	?						0	3, 4, 5, 5	1.7
	0.0 - 0.5 **SILTY CLAY** - same as above. 0.5 - 2.0 **SAND** - med brn, v fine to med, mostly fine		CL SP					0	6, 6, 8, 8	2.0
15	**SAND** - med brn, fine to coarse, mostly med, mod sorted, slightly damp.		SP						10, 12 14, 16	2.0
20	**SAND** - med brn, fine to coarse, mostly med, mod sorted, slightly damp.		SP					0	15, 25, 30, 35	2.0
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. FeCl SB5

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-17-90

Piez/Casing Size & Type NA Screened Length/Interval NA Total Depth 12'

Field Geologist/Technician BG/FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.4 **SILT** - red brn, hard, v dry, rock to 2". 0.4 - 1.4 **SILT** - as above but brn, w/ rusty mottling and white chalk or lime in lower 0.4'.		ML	NEAT CEMENT BACKFILL				0	8, 13, 31, 35	1.4/ 2.0
	SILT - as above w/ white material at 1.8".		ML					21	25, 35, 38, 48	2.0
5	**SILT** - brn, as above w/ minor clay.		ML					2	12, 25, 30, 35	1.0
	CLAYEY SILT - reddish brn, very hard, friable, dry.		ML					4	12, 25, 28, 45	1.3
10	**CLAYEY SILT**- same as above w/ minor v fine to fine sand but softer.		ML					2	23, 35, 58, 70	2.0
	SANDY SILT - reddish brn, v fine, to fine mod sort, rnd to subrnd, dry.		ML					24	18, 35, 58, 60	1.3
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. FeCl SB6

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-14-90

Piez/Casing Size & Type NA Screened Length/Interval NA Total Depth 12'

Field Geologist/Technician FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY GRAVELY FILL - med red brn to med brn, v hard, dry, earthy odor,ang rock to 1".		GM	NEAT CEMENT BACKFILL				22	50, 45 110, 130	1.7/ 2.0
	SILTY CLAY w/ GRAVEL- med brn, w/ white or dark splotches, very hard, and dry, blocky, crumbly.		CL					13	55, 75, 110	2.0
5	**SILTY CLAY** - med brn, w/ dark and white splotches, dry, blocky, earthy odor, v hard, seems cemented.		CL					16	25, 45, 75, 80	1.5
	SILTY CLAY - med brn, slightly plastic, slightly damp, no visible contamination.		CL					0	7, 7, 12	1.5
10	**SILTY CLAY** - same as above grading to sandy silt at shoe.		CL					0	8, 12, 16, 16	2.0
	SILTY CLAY - med brn, slightly plastic, slightly damp.		CL					14	9, 12, 16, 16	1.2
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. FeCl SB7

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-14-90

Piez/Casing Size & Type NA Screened Length/Interval NA Total Depth 12'

Field Geologist/Technician FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, slightly plastic, slightly damp.		CL	NEAT CEMENT BACKFILL				14	17, 45, 75, 114	1.7/ 2.0
	SILTY CLAY - med brn, w/ white and dark splotches, hard, mostly dry, crumbles.		CL					24	45, 75, refusal @ 1'	1.0
5	**SILTY CLAY** - med brn to red brn, hard, dry, w/ rock fragments to 1".		CL					6	sluff, 45, 35, 45	1.7
	SILTY CLAY - med brn, w/ white and dark splotches, distict earthy odor, mostly dry.		CL					16	12, 13, 13, 14	1.8
10	**SILTY CLAY** - multicolored, med brn, rust, red brn, mostly dry, fill like.		CL					0	12, 30, 43, 48	1.7
	0.0 -0.8 **SILTY CLAY** - same as above. 0.0- 1.5 **SILTY SAND** - lt gray, v fine to fine, mostly v fine, mod sorted. slightly damp. In shoe the soil is stained bright yellow.		CL SM					0	25, 30, 35, 40	1.5
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-01D
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-13-90
Piez/Casing Size & Type 2" PVC Screened Length/Interval 80-95' Total Depth 98'
Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.5 - 0.8 **SILT w/ minor SAND** - dk brn slightly moist, easily crumbled. 0.8 - 1.5 **SAND w/ minor Silt** - med brn, v fine to med, subang to rnd, poor sorted, moist.		ML SM	See Well Record Drawing				0	4,5,6,6	1.7/ 2.0
5	**SANDY SILT** - med bwn, v. fine to fine, poor-mod sorted, moist.		ML					0	5,5,5,5	1.5
10	0.0 - 0.6 **SLUFF** 0.6 - 0.9 **SILTY SAND** - med brn, v fine to fine, poorly-mod sorted. 0.9 - 1.6 **CLAY w/ minor SILT** - lt brn, non-plastic, friable, slightly damp.		SM CL					0	7,7,11,13	1.6
15	0.0 - 0.4 **SLUFF** 0.4- 0.7 **SANDY SILT** - med brn, v fine to fine, poorly-mod sorted, damp. 0.7-1.5 **CLAY w/ minor SILT** - lt brn, slightly plastic.		ML CL					4	11,12,15, 17	1.5
20	0.0 - 0.1 **SLUFF** 0.1 - 0.4 **SILTY SAND** - med lt brn, v. fine to med, rnd to subrnd, poorly sorted, damp. 0.4-1.7 **SAND** - lt brn, fine to med, sr to ang, mod to well sorted, moist to damp.		SM SP					4	12,15,21, 27	1.7
25	0.0 - 0.6 **SAND** - as above. 0.6 - 2.0 **SAND** - grades to med- coarse, mod sorted.		SP					11	20,25,40 45	2.0
30	0.0 - 0.5 **SLUFF** 0.5 - 1.2 **SILTY SAND**- med brn, v. fine to fine, mod sorted, rnd to v rnd, damp. 1.2 - 1.7 **CLAYEY SILT** - med lt brn.		SM ML					2	17,15,19,20	1.7
35	0.0 - 0.5 **SLUFF** 0.5 - 1.0 **CLAY** - minor silt, dry brn, v slight plastic, damp. 1.0 - 2.0 **CLAY** - gry brn, nonplastic, hard chunks, 1/2".		CL					0	25,30,50	2.0
40	0.0 - 0.3 **SLUFF**							4	15,20,21	1.5

CAMP DRESSER & McKEE INC. — Soil Boring Log -

Client: Southern California Chem. Site: Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-01D
Drill Contractor: Beylik Drilling Method: Hollow Stem Auger - 8" Diam. Date Drilled: 8-13-90
Piez/Casing Size & Type: 2" PVC Screened Length/Interval: 80-95' Total Depth: 98'
Field Geologist/Technician: BG, FW PID X FID Casing Elevation: Water Table Depth: ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.3 - 1.5 **CLAYEY SILT** - med brn, non to mod plastic, below 0.9 is v minor silt and pebbles to 1", damp.		ML	See Well Record Drawing				0	15,20,21	1.5/ 2.0
45	**SILTY CLAY** - med brn to lt brn, rust staining, damp.		CL					5	13,20,21, 20	1.7
50	**SILTY CLAY** - med slightlly reddish brn, mod to slightly plastic, v minor lt gray silty clay 0.5 to 1.0, damp.		CL					7	12,15,17, 20	1.7
55	**SANDY CLAYEY SILT** - med slight reddish brn, non to slightly plastic, rust staining, mottled.		ML					3	12,17,20, 21	2.0
60	0.0 - 0.5 **SLUFF** 0.5 -2.0 **SAND** - med brn, fine to v coarse, much med to coarse, poorly sorted, v ang to subrnd, saturated.		SP					0	18,25	2.0
65	0.0 - 1.0 **SAND** - med brn, med to coarse, med to poor sorted, ang to rnd, saturated. 1.0 - 2.0 **DECOMPOSED GRANITE** - poorly consolidated, easily crumbled, slight cementation.		SP					0	>200	1.0
70	0.0 - 0.6 **SILTY SAND** - med brn, v fine to fine subrnd to rnd, well sorted, moist. 0.6 - 1.1 **SAND w/ minor GRAVEL** - med brn, med to v coarse, poorly sorted, ang to subrnd, moist to v moist. 1.1 - 1.2 **SILTY SAND** - as above.		SM SP					0	8,27,45 for 1.5	1.2
75	0.0 - 0.4 **SAND** - med brn, v fine to med, poor to mod sorted, ang to subang, moist. 0.4 - 0.7 **SAND** - med brn, fine to v coarse, poor sorted, ang to subrnd, saturated. 0.7 - 1.3 **SAND minor SILT**- v fine to fine, mod sorted, v moist.		SP SM					0	65,75,100 for 1.5	1.3
80	0.0 - 0.2 **SLUFF**									

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-01D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-13-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 80-95' Total Depth 98'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 0.2 **SLUFF** 0.2 - 1.0 **SAND** - med brn, fine to med, mod sorted, ang to subang, v moist.		SP	See Well Record Drawing				0	15,17,38, 45	1.2/ 2.0
85	0.0 - 0.3 **SLUFF** 0.3 - 1.1 **SAND** - med brn, slightly plastic, ang to sub ang, poor to mod sort, v moist.		SP					0	50, 200 for 0.5'	1.0
90	**SAND** - med brn, fine to coarse, ang to subang, poor to mod sorted, v moist.		ML					0	17,25,40 45	
95	**CLAYEY SILT** - med brn, slightly plastic, slightly moist, v fine sand fraction.		ML					3	12,17,20, 21	
	CLAYEY SILT - same as above but mottled.		ML							
100										
105										
110										
115										
120										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-06D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-6-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 79-94' Total Depth 98'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
5	**SANDY SILT** - med brn, slightly plastic, reddish mottling, dry.		ML	See Well Record Drawing				1	sluff, 17, 21,31	1.5
10	**CLAYEY SILT** - med brn, nonplastic, crumbly, dry.		ML					80	sluff, 12, 25,30	1.5
15	0.0 - 0.5 **CLAYEY SILT** - same as above. 0.5-1.5 **SAND** - lt gray, v fine to v coarse, ang to subrnd, poorly sorted, damp.		ML SP					27	10,35,40, 45	1.5
20	**SAND** - same as above but hydrocarbon odor and darker gray banding throughout. Probably staining.		SP					77	22,35,40, 45	1.7
25	0.0 - 0.7 **SAND** - as above, grading to... 0.7 - 1.6 **SANDY SILT** - darker gray, v fine sand, non-plastic.		SP ML					136	12,15,18, 22	1.6
30	**SANDY SILT** - med dk brn, nonplastic, minor mottling top 1'.		ML					70	12,16,18, 20	2.0
35	0.0 - 0.6 **SANDY CLAYEY SILT** - dk brn, slightly plastic, damp to moist, v fine sand. 0.6 - 2.0 **SILTY CLAY** - med brn, minor reddish brn & gray mottling, moist to damp.		ML CL					34	7,8,8,17	2.0
40	0.0 - 0.6 **CLAY w/ minor SILT** - brn to gray brn, non-plastic, damp to moist.							2	12,19,20, 24	2.0

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-06D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-6-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 79-94' Total Depth 98'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.6 - 2.0 **SILTY CLAY** - med reddish brn, slight to mod plastic, damp to moist reddish gray mottling.		CL					2	12,19,20, 24	2.0/ 2.0
45	0.0 - 0.9 **SILTY CLAY** - med brn, grading to mottled lt brn & gray mottling at 0.3 to 0.4', slightly plastic, slightly damp. 0.9 - 2.0 **SANDY SILT w/ CLAY** - med brn, v slightly plastic, slightly damp, v fine sand.		CL ML					5	13,20,21, 20	1.7
50	0.0 - 0.6 **CLAY** - med brn, mod to slightly plastic, good aquitard. 0.6 - 2.0 **SILTY CLAY grading to a CLAYEY SILT** - med brn, slightly plastic, damp.		CL CL					8	sluff, 12, 15, 25	2.0
55	0.0 - 0.7 **SILTY CLAY** - med gray brn, slightly plastic, v moist, some v fine sand. 0.7 - 1.8 **SAND** - med brn, v fine to v coarse, poorly sorted, ang to subrnd, saturated.		CL SP	See Well Record Drawing				5	12,20,30, 35	1.8
60	**SAND** - same as above.		SP					4	20, 40, 60, 75	1.5
65	0.0 - 0.5 **SAND** - same as above but w/ minor gravel to 1'. 0.5 - 1.6 **SILTY CLAY** - med brn, slightly plastic, moist. 1.6 - 2.0 **SAND** - same as above but v fine to coarse, no gravel.		SP CL SP					1	10,21,30, 35	1.8
70	**SAND** - med lt brn, v fine to coarse, mostly med, subrnd to ang, mod to poorly sorted, saturated.		SP					1	20,40, 75,110	1.8
75	**SAND** - same as above but 20 % gravel, one stone to 1.5".		SP					0	45,90, 120,150	1.7
80	**SAND w/ GRAVEL** see next page.									

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-06D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-13-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 79-94' Total Depth 98'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SAND w/ GRAVEL - med lt brn, v fine to v coarse, poorly sorted, subrnd to ang, saturated, gravel ~30 % to 3/4".		SP	See Well Record Drawing			X	0	45,75 120,125 for 4"	1.8/ 2.0
85	**SAND w/ GRAVEL** - same as above but mostly coarse to v coarse.		SP				X	1	sluff,57, 90,132	1.8
90	**SAND w/ minor GRAVEL** - lt med brn, fine to v coarse, mostly coarse, poorly sorted, saturated, gravel to 2". Possible formation change at 93'.		SP				X	1	sluff, 85, 90,120	1.6
95	0.0 - 0.6 **SAND** - med brn, v fine to v coarse, mostly coarse, some gravel, ang to subang, saturated.		SP				X	0	sluff, 10, 22,58	1.8
	0.6 - 1.8 **CLAYEY SILT** - med prn, v slightly plastic, slightly damp, red/brn mottling.		ML							
	0.0 - 1.5 **SANDY SILT** - med brn, rust mottling, slightly plastic; sand is v fine grading to v slightly plastic		ML			X	X	0	push, 21, 25,31	1.5
100										
105										
110										
115										
120										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-12D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-31-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 85-100' Total Depth 101'

Field Geologist/Technician BG, FW PID X FID __ Casing Elevation __ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
5	**SILTY CLAY** - med dk bwn, slightly plastic, slightly moist.		CL	See Well Record Drawing			X	230	sluff, 6, 5,6	1.8/2.0
10	0.0 - 0.4 **SLUFF** 0.4 - 2.0 **SILT Y CLAY** - med dk brn, slightly plastic, slightly moist, 0.6-0-8 rock and gravel.		CL				X	17	9,15,17, 21	2.0
15	0.0 - 0.2 **SILT Y CLAY** same as above grading to... 0.2-1. 6 **SAND** -med brn, v fine to med, mostly fine, mod sorted, ang to subrnd, slightly moist, grades to mostly med w/ some coarse.		CL SP				X	1	4,6,9,12	1.6
20	0.0 - 1.0 **SAND** - med brn, v fine to med, mostly fine, mod sorted, ang to subrnd, slightly moist. 1.0 - 2.0 **SAND** - lt gray, fine to v coarse, mostly coarse, mod sorted, subang to subrnd, slightly moist.		SP				X	17	9,21,30, 35	2.0
25	**SAND** - same as above except fine to coarse, mostly med, grading to finer, mostly med to fine.		SP				X	0	15,25,35 40	2.0
30	0.0 - 1.0 **SAND** - lt med brn, v fine to med, mostly fine, mod sorted, ang to subrnd, slightly moist. 1.0 - 2.0 **SAND** - lt brn, v fine to v coarse, mostly coarse, poorly sorted, ang to subrnd, slightly moist.		SP				X	0	21,35,50, 65	2.0
35	**SILTY CLAY** - med brn, slightly plastic, v slightly moist.		CL				X	2	45,20,25, 30	2.0
40	**SILTY CLAY** - med slightly to mod plastic, v minor gravel to 1/2".		CL				X	30	7,9,12,13	1.8

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-12D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-31-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 85-100' Total Depth 101'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - see previous page		CL	See Well Record Drawing			X			
45	**SILTY CLAY** - same as above but w/ gray rust mottling.		CL				X	55	6,9,12,22	2.0
50	0.0 - 0.3 **SILTY CLAY** - same as above. 0.3 - 1.8 **CLAYEY SILT** - more silt, harder w/minor v fine sand, non-plastic, v slightly moist.		ML				X	38	12,20,25 30	1.8
55	0.0 - 0.3 **SLUFF** - same as above. 0.3 - 2.0 **CLAYEY SANDY SILT** - med brn, gray mottling, v slightly plastic, v slightly damp.		ML				X	13	sluff, 12, 15,18	2.0
60	0.0 - 0.8 **SILTY CLAY** - -med brn, v moist, slightly plastic. 0.8 - 2.0 **SAND** - lt to med brn,v fine to coarse, mostly med to coarse, poorly sorted, ang to subrnd, saturated.		CL SP				X	2	sluff,4 4, 8	2.0
65	0.0 - 1.5 **SAND** - med brn, fine to v coarse, mostly med to coarse, poorly sorted, ang to subrnd, saturated.		SP			X	X	0	sluff, 45, 70,80	1.5
70	0.0 - 0.4 **SAND** - as above but w/ gravel to 1/2". 0.4 - 1.4 **SAND** - med brn, fine to coarse, mostly med, subrnd to ang, poorly sorted, saturated.		SP				X	0	sluff, 45 90,110	1.4
75	0.0 - 0.4 **SAND** - med brn, v fine to med, subrnd to subang, poorly sorted, saturated, minor silt. 0.4 - 1.4 **SAND & GRAVEL** - med.brn, fine to v coarse, mostly med to v coarse, v poorly sorted, ang to subang, saturated, gravel to 2".		SP				X	0	sluff, 60 90, 120	2.0
80	0.0 - 0.7 **SAND** - same as above.		SP				X	0	11,9,14,17	1.7

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-12D
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-31-90
Piez/Casing Size & Type 2" PVC Screened Length/Interval 85-100' Total Depth 101'
Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.7 - 1.7 **SAND** - med brn, v fine to coarse, mostly med, poorly sorted, subrnd to ang, saturated, 0.7 - -0.9 sand w/ silty clay lenses.		SP	See Well Record Drawing			X			
85	**SAND** - med brn, v fine to coarse, mostly med, mod to poorly sorted, ang to subrnd, saturated.		SP				X	0	sluff,59, 70, 75	1.5
90	**SAND w/ GRAVEL** - med brn, fine to v coarse, poorly sorted, ang to subrnd, saturated; 0.4' clay ball, 0.9 - .1. gravel, saturated, gravel to 2" w/ sand.		SP				X	0	sluff, 90, 112 138	1.7
95	0.0 - 1.3 **SAND** - med lt brn, med to v coarse, mod to poorly sorted, ang to subrnd, saturated. 1.3 - 1.7 **SILT** - med brn, v slightly plastic, damp.		SP ML				X	0	sluff, 45, 25 30	1.7
100	0.0 - 0.7 **SLUFF** 0.7 - 2.0 **SILTY CLAY** - med brn, slightly plastic.		CL				X	0	19, 20, 25, 35	2.0
105										
110										
115										
120										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-13D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-17-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 78-93' Total Depth 98'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
5	0.0 - 0.5 **CLAY** - mixed med brn and gray, non-plastic, minor silt and gravel to 0.5", dry, crumbles easily. 0.5 - 0.6 **SILTY CLAY** - black, dry. 0.6 - 2.0 **SILTY CLAY** - grading to a clayey silt, med dk brn, black mottled zone 1.1 - 1.3		CL ML	See Well Record Drawing				56	6,11,9,8	2.0/2.0
10	0.0 - 0.2 **SLUFF** 0.2 - 0.3 **SILTY CLAY** - med brn, grading to dk brn, w/ dryer, less crumbly cuttings. 0.3 - 1.8 **SILTY CLAY** - mod plastic, damp grading to clayey silt.		CL					3	3,7,8,8	1.8
15	0.0 - 0.3 **SILTY CLAY** - same as above. 0.3 - 0.9 **CLAYEY SILT** - silver gray, slightly plastic, damp. 0.9-1.1 **SAND** - med brn, fine to med, ang, well sorted, damp. 1.1 - 1.7 **SILT** - med gray, slightly moist, v slightly plastic.		CL ML SP ML					14	4,9,12,16	1.7
20	0.0 - 0.4 **SILTY CLAY** - med dk brn, mod plastic, slightly moist. 0.4 - 1.8 **SAND** - lt gray, fine to v coarse, mostly med, ang to subrnd, poorly sorted, moist.		ML SP					280	15, 22, 23, 25	1.8
25	0.0 - 0.2 **SLUFF** 0.2 - 1.7 **SAND**- lt gray, fine to coarse, mostly med, ang to subrnd, mod to well sorted, moist.		SP					18	25, 40, 50	1.7
30	0.0 - 0.3 **SAND** - same as above. 0.3 - 2.0 **CLAYEY SILT** - med brn, non-plastic, slightly moist.		SP ML					9	15,15,25,50	2.0
35	**CLAYEY SILT** - grading to silty clay, med brn, slightly moist, slightly plastic, v fine sand.		CL					7	7,10,12,15	2.0
40	**SILTY CLAY** - see nex t page.							0	7,12,15,15	2.0

CAMP DRESSER & McKEE INC. — Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-13D
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-17-90
Piez/Casing Size & Type 2" PVC Screened Length/Interval 78-93' Total Depth 98'
Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, slightly to mod plastic, gray rust mottled, slightly moist, slightly plastic, hard chunks of shale rock at 0.6 to 1.5"		CL				X	0	7,12, 15,15	2.0/2.0
45	**SILTY CLAY** - same as above, 0.0 - 0.3 w/ fine gravel.		CL				X	2	10, 12, 15, 21	2.0
50	**SILTY CLAY** - med brn, slightly plastic, slightly moist, minor v fine sand		CL				X	0	7,12, 15,15	2.0
	0.0 - 3.5 **SILTY CLAY** - same as above but, 0.0 - 0.6 w/ 20% coarse gravel fraction. 2.5 - 3.5 w/ 20% sand fraction.		CL				X			3.5
55	0.0 - 0.3 **SILTY SAND** - med brn, v fine to med, mostly fine, mod sorted, ang to subrnd, saturated. 0.3 - 1.0 grades to **SILTY SAND**, mostly med. 1.0 - 2.3 **SAND** - lt brn, fine to coarse, mostly med, mod to poorly sorted, lt brn at shoe.		SM SP	See Well Record Drawing			X	0		2.3
60										
65	0.0 - 0.7 **SLUFF** - sand, dark brn, saturated, fine to med. 0.7 - 1.7 **SAND** - med brn, fine to coarse, minor gravel to 1", mostly coarse, poorly sorted, ang to subrnd, saturated to moist.		SP				X	0	45,130,210	1.7
70										
75	0.0 - 1.2 **SAND w/ GRAVEL** - med brn, fine to v coarse, mainly coarse, poorly sorted, v ang to rnd, saturated; gravel is multicolored chips, subrnd, pooly sorted to 1.5". 1.2 - 1.4 **SAND** - med brn, fine, well sorted, subrnd to rnd, saturated.		SP				X	2	45, 60	1.4
80	0.0 - 0.2 **SAND w/ GRAVEL** - see next page.		SP				X			

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-13D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-17-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 78-93' Total Depth 98'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	SAND w/ GRAVEL - med brn, fine to v coarse, mainly coarse, poorly sorted, v ang to rnd, saturated; gravel is multicolored chips, subrnd, pooly sorted to 1.5".		SP	See Well Record Drawing			X	10	80, 150 for 5"	
85	0.0 - 0.3 **SAND** - med brn, fine to med, mostly med, poorly sorted, ang to subrnd, saturated. 0.3 - 0.7 **SAND w/ GRAVEL** - same as above with gravel to 2". 1.2 - 1.3 **SAND** - med red brn, fine to med, mod sorted, ang to subrnd, saturated.		SP				X	0	50, 120, 130 for 4"	1.3/ 2.0
90	0.0 - 0.6 **SAND** - med brn, fine to med, ang to sub rnd, mod sorted, saturated. 0.6 - 1.2 **SAND w/ GRAVEL** - med brn, med to v coarse, gravel to 2" rnd, sand is angular to subrnd, v poorly sorted. 1.2 - 1.8 **SAND** - med red brn, v fine to fine, minor med, mod to well sorted, ang to subrnd, saturated.		SP				X	0	130, 200 for 2"	1.8
95	0.0 - 1.0 **SILT w/ minor SAND**- med dk brn, v slightly plastic, saturated. 1.0 - 2.0 **CLAYEY SILT** - mottled red w/ some black, v slightly non-plastic.		ML ML			X	X	0	15, 29 30, 35	2.0
100										
105										
110										
115										
120										

CAMP DRESSER & McKEE INC. Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-14D
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-27-90
Piez/Casing Size & Type 2" PVC Screened Length/Interval 88-103' Total Depth 111'
Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
5	**CLAYEY SILT grading to SILTY CLAY** - dk brn, grading to med brn, grading from non- to slightly plastic, slightly moist, carbonaceous and gravel layer to 1/2" at 0.4'.		ML			MW 14S	X	7	6, 11, 12, 18	2.0/ 2.0
10	**CLAYEY SILT grading to SILT** - med brn, grading lighter, trace gravel 0.25-0.8', grading from non- to slightly plastic, slightly moist.		ML				X	106	4, 11, 16, 17	2.0
15	0.0 - 0.2 **SILT** - dk brn, possibly sluff. 0.2 - 2.0 **SAND** - med brn, v. fine to med, mostly fine, mod sorted, slightly moist.		ML SP	See Well Record Drawing			X	0	7, 11, 12, 18	2.0
20	0.0 - 2.0 **SAND** - same as above.		SP				X	0	13, 18, 21, 24	2.0
25	0.0 - 1.1 **SAND** - lt brn, med to v coarse, v ang to subrnd, poorly sorted, minor gravel to 1/2".		SP				X	2	20, 50	1.1
30	**CLAYEY SILT** - med brn, v slightly plastic, heavily mottled, v slightly damp.		ML				X	0	9, 17, 23, 28	1.7
35	**SAND** - lt brn, v fine to v coarse, more coarse, ang to subrnd, poorly sorted, minor gravel to 1/4".		SP				X	2	21, 49, 50, 50	2.0
40	0.0 - 2.0 **SAND** - see next page.		SP				X	3	21, 49, 68, 72	1.8

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-14D
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-27-90
Piez/Casing Size & Type 2" PVC Screened Length/Interval 88-103' Total Depth 111'
Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SAND- lt brn, fine to v coarse, mostly coarse, ang to subrnd, poorly sorted, minor gravel to 1/2", Fe oxide at 1.0', slightly moist.		SP							
45	**SAND** - lt brn, fine to v coarse, mostly coarse, v minor gravel to 1/2", mod sorted, ang to subang, slightly moist.		SP					2	22, 37, 48, 69	1.8/ 2.0
50	**SANDY GRAVEL** - multicolored to lt med brn, gravel to 1/4", ang to subrnd, poorly sorted, grades to sand w/ gravel.		SP					319	27, 67, 95	1.2
55	**SILTY CLAY** - med dark brn, mod to slightly plastic.		CL					20	11, 12, 25, 30	0.2
60	0.0 - 0.5 **SLUFF** - SILTY CLAY, med brn, mod to slightly plastic, damp. 0.5 - 1.4 **SAND** - red med brn, v fine to fine, mod to well sorted, ang to subang, moist. 1.4 - 1.8 **SILTY CLAY** - med brn, mottled, staining, gray and rust, mod to slightly plastic, slightly moist.		CL SP CL	See Well Record Drawing				23	sluff, 12, 20, 22	1.8
65	0.0 - 1.2 **SAND w/ minor SILT**- med brn, v fine to fine, well sorted, subang to subrnd, saturated. 1.2 - 1.7 **SILTY CLAY** - med brn, plastic to mod plastic, moist. 1.7 - 2.0 **SAND** - lt brn, multicolored, med to coarse, mod to poorly sorted, ang to subrnd, saturated.		SP CL SP					7	sluff, 12 15, 15	2.0
70	0.0 - 0.1 **SAND w/ minor SILT**- med brn, v fine to fine, well sorted, subang to subrnd, saturated. 0.1 - 1.2 **SAND** - med gray, v fine to coarse, mostly coarse, poorly sorted, ang to subrnd, saturated.		SM SP					10	sluff, 65, 100	1.2
75	0.0 - 1.1 **SAND** - med gray, v fine to coarse, mostly coarse, poorly sorted, ang to subrnd, saturated.		SP					0	15, 29, 30, 35	1.1
80	0.0 - 1.5 **SAND** - see next page.		SP					0	25, 80, 100, 130	1.5

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-14D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-27-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 88-103' Total Depth 111'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 1.5 **SAND** - lt brn, v fine to coarse, mostly coarse, poorly sorted, ang to subrnd, saturated, minor gravel to 2".		SP							
85	0.0 - 1.5 **SAND** - med gray, v fine to coarse, mostly coarse, poorly sorted, ang to subrnd, saturated, w/ gravel w/ sand lense 0.5 - 0.7', gravel to 1.5".		SP					0	25,90, 130	1.5/ 2.0
90	0.0 - 0.5 **SAND** - med brn, fine to v coarse, mostly ang to subrnd, mod sorted, saturated. 0.5 - 1.2 **SAND w/ GRAVEL** - same as above. 1.2 - 1.7 **SAND** - lt brn, fine to v coarse, ang to subang, mod sorted, saturated.		SP	See Well Record Drawing					sluff, 75, 150,200 for 4"	1.7
95	**SAND** - med lt brn, fine to v coarse, mostly coarse, minor gravel to 1/2", ang to subrnd, saturated.		SP					0	sluff, 75, 150, 200	
100	0.0 - 1.3 **SAND w/ GRAVEL** - med lt brn, fine to v coarse, v little med, mostly coarse, poorly sorted, ang to subang, ~20% gravel to 1.5" diam at 0.9 - 1.2'. 1.3 - 1.6 **SAND** - med brn, fine to v coarse, poorly sorted, ang to subrnd , mostly med to coarse, saturated.		SP					0	sluff, 45, 80, 150	1.6
105	0.0 - 0.7 **SILTY SAND** - med brn, v fine to coarse, ang to subrnd, v poorly sorted. 0.7 - 1.4 **SILTY SAND** - med brn, v fine to fine, mod sorted, saturated.		SM						sluff, 12, 15, 20	1.4
110	0.0 - 0.5 **SLUFF** - SILTY CLAY w/ GRAVEL - dk brn, mod plastic, saturated, sticky, gravel to 1" 0.5 - 1.1 **SILTY CLAY** - dk brn, mod to slightly plastic, 1" thick sand and gravel lense at 1'. 1.1 - 1.3 **SAND** - med brn, v fine to coarse, mostly med, poorly sorted, subrnd to ang.		CL SP					0	sluff, 9, 12,17	1.3
115										
120										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-15D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-21-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 109-124' Total Depth 126'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
5	0.0 - 0.2 **SLUFF** - SILTY CLAY - med brn. 0.2 - 1.5 **CLAYEY SILT** - med lt brn, slightly plastic, v slightly damp.		ML	See Well Record Drawing			X	0	8, 12 15, 19	1.5/ 2.0
10	0.0 - 0.5 **CLAYEY SILT** - same as above. 0.5 - 1.9 **SAND w/ minor SILT** - red brn, v fine to fine, subang to rnd, mod to well sorted, v slightly moist.		ML ML				X	0	7, 8, 9, 7	1.9
15	0.0 - 0.5 **SAND w/ minor SILT** - same as above, possible sluff. 0.5 - 1.5 **SAND** - lt brn, fine to med, mod to well sorted, ang to subrnd, slightly moist.		ML SP				X	0	7, 9, 15, 21	1.5
20	0.0 - 1.8 **SAND** - same as above.		SP				X	0	19, 21, 35, 45	1.8
25	0.0 - 0.2 **SAND** - med to slight red brn, v fine to fine, mod sorted, slightly moist. 0.2 - 1.7 **SAND** - lt brn, fine to med, mod to poorly sorted, ang to subrnd, slightly moist.		SP			X	X	0	21, 30, 45, 50	1.7
30	0.0 - 0.5 **SILTY CLAY** - med brn, v slighty moist, slightly plastic, grading to... 0.5 - 1.6 **CLAYEY SILT** - med brn, v slightly plastic.		CL ML				X	0	19, 12, 15, 19	1.6
35	0.0 - 0.4 **CLAYEY SILT** - same as above, possible sluff. 0.4 - 2.0 **SAND w/ GRAVEL** - lt gray, fine to v coarse, poory sorted, ang to subrnd, slightly moist, gravel to 1.25".		ML SP				X	0	35, 60, 75, 95	2.0
40	0.0 - 0.2 **SAND w/ GRAVEL** - see next page.		SP				X		32, 65, 95. 110	1.7

CAMP DRESSER & McKEE INC. Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-15D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-21-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 109-124' Total Depth 126'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.2 **SAND w/ GRAVEL** - med dk brn, poorly sorted, ang to subrnd, slightly moist. 0.2 - 1.7 **SAND w/ GRAVEL** - same as above but lt brn, and gravel to 1.75".		SP				X		32, 65, 95, 110	1.7/ 2.0
45	**SILTY SAND** - med brn, v fine w/ some clay, v slightly plastic, slightly moist.		SP				X	0	9, 12, 15, 18	0.5
50	0.0 - 0.3 **SILTY CLAY** - med brn, slight to mod plastic, possible sluff. 0.3 - 1.6 **SAND** - lt brn, fine to v coarse, w/ fine gravel, poorly sorted, damp, Fe staining. 1.6 - 1.7 **CLAYEY SILT** - med red brn, v slightly moist, v slightly plastic.		CL SP ML			X	X	21	45, 40 45, 50	1.7
55	0.0 - 0.3 **SILTY SAND** - possibly sluff, v fine to med, mostly fine, poor to mod sorted, subrnd to ang, saturated. 0.3 - 1.8 **SAND** - fine to v coarse, mostly med to coarse, poorly sorted, ang to subrnd, saturated, monor gravel to 0.25".		SM SP	See Well Record Drawing			X	17	sluff, 25, 40, 45	1.8
60										
	SAND - med brn, fine to coarse, mostly med, ang to subrnd, mod sorted, saturated.		SP			X	X	0	32, 56, 145, 175 for 5"	2.0
65	**SAND** - same as above		SP				X	0	30, 50, 7, 34	2.0
70	**SAND w/ GRAVEL** - med lt brn, med to v coarse, subang to ang, mica, gravel to 0.75".		SP				X	0	sluff, 57, 65, 75	1.6
75	0.0 - 1.4 **SAND w/ minor GRAVEL** - gravel to 0.5", fine to coarse, mostly med; sand - same as above. 1.4 - 2.0 **SAND** - med brn, v fine to med, mostly fine, well sorted, ang to subang, saturated.		SP				X	0	sluff, 23, 29, 42	2.0
80	0.0 - 1.2 **SAND** - see next page.		SP				X	0	sluff, 85, 200	1.5

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-15D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-21-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 109-124' Total Depth 126'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 1.2 **SAND** - med brn, fine to coarse, mostly med to coarse, mod sorted, ang to subrnd, saturated. 1.2 - 2.0 **SAND w/ GRAVEL** - sand same as above, gravel ~20 % to 1"		SP	See Well Record Drawing			X	0	sluff, 85, 200	1.5/ 2.0
85	0.0 - 0.9 **SAND & GRAVEL** - grading to sand w/ gravel, lt brn, fine to v coarse, gravel to 0.75", ang to subrnd, v poorly sorted, saturated. 0.9 - 1.3 **SAND** - med brn, v fine to med, mostly fine, mod sorted, ang to rnd, saturated.		SP				X	0	16, 30, 52, 61 for 4"	1.3
90	0.0 - 1.6 **SAND w/ GRAVEL** - med brn, fine to v coarse, mostly coarse, poorly sorted, saturated, gravel to 1".		SP				X	0	sluff, 51, 65, 81	1.6
95	0.0 - 0.5 **SAND** - med brn, fine to v coarse, mostly med, poorly sorted, ang to subrnd, saturated, v minor gravel. 0.5 - 1.0 **SAND w/ GRAVEL** - gravel to 1", sand same as above. 1.0 - 1.5 **SAND** - med brn, fine to med, mostly med, mod to poorly sorted, ang to subrnd.		SP				X	0	20, 40, 50, 74	1.5
100	0.0 - 1.5 **SAND** - med brn, fine to v coarse, grades finer, mod to poorly sorted, ang to subrnd, gravel to 1", saturated. 1.5 - 1.7 **SANDY CLAYEY SILT** - med brn, slightly to non-plastic, moist.		SP ML				X	0	50, 80, 100, 135	1.7
105	0.0 - 0.3 **SAND** - med lt brn, fine to v coarse, minor gravel, poorly sorted, gravel to 0.5". 0.3 - 0.5 **SILT** - med brn, non-plastic, saturated. 0.5 - 1.0 **SAND** - med brn, v fine to med, mod to poorly sorted, ang to subrnd, saturated.		SP ML SP				X	0	19, 20, 21	1.0
110	0.0 - 1.4 **SAND** - med brn, v fine to med, mostly med, ang to subrnd, saturated.		SP				X	0	20, 30, 45, 50	1.4
115	0.0 - 1.2 **SAND** - same as above w/ minor gravel to 0.75".		SP				X		20, 30, 45, 55	1.2
120	0.0 - 1.0 **SAND** - see next page.		SP				X	0	20, 45, 60, 90	1.3

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. MW-15D

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 8-21-90

Piez/Casing Size & Type 2" PVC Screened Length/Interval 109-124' Total Depth 126'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
120	0.0 - 1.0 **SAND** - med brn, fine to coarse, mostly med, mod sorted, ang to subrnd, saturated. 1.0 - 1.3 **SILTY SAND** - med brn, fine to coarse, v slightly plastic, minor gravel to 0.75".		SM	See Well Record Drawing			X	0	20, 45, 60, 90	1.3/ 2.0
125	0.0 - 1.3 **SAND** - lt brn, med to v coarse, mostly coarse, grades finer, ang to subrnd, poorly sorted, saturated.		SP				X	0	80, 160, 200	1.3
130										
135										
140										
145										
150										
155										
160										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. PI - 01
Drill Contractor Beylik Drilling Method Hollow Stem Auger Date Drilled 9-10-90
Piez/Casing Size & Type N / A Screened Length/Interval N / A Total Depth 35 ft.
Field Geologist/Technician TL,SW PID X FID ___ Casing Elevation N / A Water Table Depth N / A

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
0–5	SILTY SAND - red brn, v fine to med, damp, 0.0 to 1.0 ft gray and black discoloration.		SM	BACK FILLED WITH CEMENT	Not Applicable			96	6,9,11,12	2.0 / 2.0
5	SILTY SAND - red brn, v fine to med, damp, 0.0 to 1.0 ft gray discoloration more pronounced.		SM					137	7,9,12,15	2.0
10	0.0 - 0.3 SANDY SILT - dk brn w/ blk and gray mottling and banding, slightly damp, v tight , stiff. 0.3 - 1.4 SAND - lt brn, fine to med, poorly sort, slightly damp, cs at bottom w/ red oxidation bands		ML SP					42	S,7,9,9	1.4
15	SAND - olv brn, fine to med, mod sort, subang to subround, slightly damp, some red bwn oxidation.		SP					36	4,7,11,12	1.5
20	0.0 - 0.8 SAND - lt brn, med to v cs, subang to subround, poorly sort, slightly damp, minor gravel to 3/4". 0.8 - 1.5 GRAVELLY SAND - brn w/ red oxidation, fine to v cs, poorly sorted, slightly damp, gravel to 3/4".		SP					30	17,20,25,35	1.5
25	SANDY SILT - olv brn, v fine sand, subang to subround, stiff, slighty damp, discoloration.		ML					50	25,45,65,75	1.2
30	0.0 - 0.9 SANDY SILT - olv brn, v fine sand, subang to subround, stiff, slightly damp, discoloration. 0.9 - 2.0 SILT - olv gray, minor mottling, minor very fine sand, v slightly plastic, v stiff, v dry, red oxidation.		ML					11	S,20,45,65	2.0
35	SILT - med red brn, v slightly plastic, slightly damp.		ML					4	12,19,22,23	1.2
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. PI - 02
Drill Contractor Beylik Drilling Method Hollow Stem Auger Date Drilled 9-12-90
Piez/Casing Size & Type N / A Screened Length/Interval N / A Total Depth 45 ft.
Field Geologist/Technician FW,GS PID X FID Casing Elevation N / A Water Table Depth N / A

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: USCS	Borehole Const.	Water Level	FID/PID (ppm)	BLOWS	RECOV.
	0 Foot Sample SLANT BORING (30°) - DEPTHS INCLINED VALUES NOTE: The top 10 feet was not done to scale.		BACK FILLED WITH CEMENT	Not Applicable			
15/12.9	0.0 - 2.0 **SLUFF** - dk brn, silty clay w/ sand and gravel. 2.0 - 3.0 **SILT** - dk brn, grading to med brn, clayey grading to no clay, v slightly plastic, slightly damp, sulfide like mineralization.	ML			12		3.0
20/17.3	0.0 - 2.0 **SAND** - med brn, v fine to med, mode: fine, mod sort, ang to subang, slightly damp, minor silt.	SP			10		2.0
25/21.7	0.0 - 1.6 **SAND** - med brn, fine to v coarse, mode: coarse, poor sort, ang to subround, slightly damp, minor gravel to 1 inch.	SP			11		1.6
30/25.9	0.0 - 1.6 **SAND** - med brn, fine to v coarse, mod sort, ang to subround, slightly damp. 1.6 - 1.9 **CLAYEY SILT** - med brn, v fine , minor sand, v slighty plastic, slighty damp. 1.9 - 2.2 **SAND** - lt gray brn, v fine to fine, well sorted, damp.	SP ML SP			2		2.2
35/30.3							
40/34.6							
45/38.9	1.0 - 2.0 **SLUFF** 2.0 - 4.0 **SILTY CLAY** - med brn, slighty plastic to mod plastic, slightly damp, flakey.	CL					4.0
50/43.3							

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. PI - 03

Drill Contractor Beylik Drilling Method Hollow Stem Auger Date Drilled 9-12-90

Piez/Casing Size & Type N / A Screened Length/Interval N / A Total Depth 37 ft.

Field Geologist/Technician FW,GS,SW PID X FID Casing Elevation N / A Water Table Depth N / A

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
0	**SILTY SAND** - med brn, v fine to med; poorly sorted; subang to subround; slightly damp; no odor; no discoloration.		SM	BACK FILLED WITH CEMENT	Not Applicable			37	35,40,41,42	1.6 / 2.0
5	**SANDY SILT** - med red brn, v fine to fine; subang to subround; minor clay; slightly damp; no discoloration; no odor; slightly plastic, very stiff.		ML					28	12,15,25,30	1.8
10	**SANDY SILT** - med red brn, v fine to med fine; subang to subround; minor clay; slightly damp; no discoloration; no odor; slightly plastic, very stiff.		ML					28	11,12,15,15	1.6
15	0.0 - 0.7 **SANDY SILT** - med red brn, v fine to fine; subang to subround; minor clay; slightly damp; no odor; no discoloration; slightly plastic, stiff. 0.7 - 1.6 **SAND** - lt brn, fine to med; mod sort; subang to subround; slightly damp.		ML SP					5	11,15,21,21	1.6
20	0.0 - 1.0 **SAND** - med brn, v fine to coarse; mode: med; mod sorted; ang to subang; slightly damp. 1.0 - 2.0 **SAND** - lt brn, v fine to coarse; mode: coarse; poorly sort; ang to subround; damp.		SP					29	12,15,37,31	2.0
25	**SAND** - med brn, fine to coarse; mode: med; mod sorted; ang to subang; slightly damp.		SP					25	12,25,40,45	1.8
30	**CLAYEY SILT** - med brn, minor v fine sand; v slightly plastic; slightly damp.		ML					21	3,10,12,16	1.8
35	**SILTY CLAY** - med brn, gray mottling; slightly plastic; slightly damp.		CL					7.0	6,9,12,10	1.8
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. PI - 04

Drill Contractor Beylik Drilling Method Hollow Stem Auger Date Drilled 9-10-90

Piez/Casing Size & Type N / A Screened Length/Interval N / A Total Depth 37 ft.

Field Geologist/Technician TL,SW PID X FID Casing Elevation N / A Water Table Depth N / A

DEPTH (feet)	DESCRIPTION	USCS	Borehole Const.	Water Level	FID/PID (ppm)	BLOWS	RECOV.
0	SAND - blk w/ minor orange spots, foundry sands.	SP	BACK FILLED WITH CEMENT	Not Applicable	3	3,12,25,25	1.7/ 2.0
5	0.0 - 0.5 SAND - blk w/ minor orange spots, foundry sands. 0.5-1.4 SANDY SILT - dk brn, fine to med, subang to subround, slightly damp, PIECES OF WOOD, 1 piece of gravel to 2".	SP, ML			8	S,6,4,4	1.4
10	0.0 - 0.25 SANDY SILT - blk, v fine to med, poorly sorted, minor gravel. 0.25 - 1.1 SANDY CLAY - red brn, v stiff, slightly plastic, slightly damp, minor silt.	ML, CL			5	6,7,9,11	1.1
15	0.0 - 0.6 SANDY CLAY - red brn, v stiff, slightly plastic, slightly damp, minor silt. 0.7 - 1.6 SAND - med brn, v fine to med, poorly sort, subang to subround, slightly damp.	CL, SP			18	6,9,11,12	1.2
20	0.0 - 0.5 SAND - med brn, v fine to med, poorly sort, subang to subround, slightly damp. 0.5 - 1.5 SAND - gry brn, fine to cs, mode: med, mod sort, subang to subround, damp.	SP			49	7,11,21,28	1.5
25	SAND - lt brn, med to cs, mod sorted, subang to subround, damp.	SP			51	17,25,47,52	1.8
30	0.0 - 1.0 SAND - lt brn, fine to cs, subang to subround, poorly sort, coarser last 0.3". 1.0 -1.7 SANDY SILT - dk brn, slightly plastic, moist.	SP, ML			38	12,17,25,30	1.7
35	0.0 - 0.7 GRAVELLY SAND - dk brn to blk, fine to cs, subang to subround, poorly sorted, slightly damp, gravel to 1". 0.7 - 1.8 SILTY CLAY - olv brn, nonplastic, slightly damp, stiff.	SP, CL			17	12,12,15,20	1.8
40							

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. PI - 05

Drill Contractor Beylik Drilling Method Hollow Stem Auger Date Drilled 9-11-90

Piez/Casing Size & Type N / A Screened Length/Interval N / A Total Depth 36 ft.

Field Geologist/Technician JGS, FW PID X FID Casing Elevation N / A Water Table Depth N / A

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SAND - red brn, fine to med w/ cs sand and gravel frags to 1/2", brick frags - blk to brn, w/orange and red mottling, green to purple staining at 1.7 ft.		SP	BACK FILLED WITH CEMENT	Not Applicable			3	21,35,20,12	1.6 / 2.0
5	**SAND** - brn, grading to org brn, v fine to med, damp, minor clay and silt.		SP					0	5,12,11,12	2.0
10	0.0 - 0.7 **SAND** - brn, w/ blk mottling, v fine to med, damp, minor clay and silt. 0.7 - 2.0 **SAND** - brn, grading to org bwn, v fine to med, damp, minor clay and silt.		SP					0	6,9,11,12	2.0
15	0.0 - 0.8 **SAND** - brn, grading to org brn, v fine to med, damp, minor clay and silt. 0.8 - 2.0 **SAND** - tan, fine to med, damp, locally saturated.		SP					1.0	7,9,9,10	2.0
20	**SAND** - tan, fine to med, damp, locally saturated.		SP					3.7	7,9,12,13	2.0
25	**SAND** - fine grading to cs, slighty damp to damp, locally saturated, minor gravel to 1/4".		SP					8	S,20,50,55	1.5
30	**SILT** - dk tan to olv tan, minor fine sand, subang.		ML					2	12,19,25,30	2.0
35	**CLAYEY SILT** - dk tan to olv tan grading to gry brn, minor fine sand, subang, slightly moist.		ML					0	12,29,30,31	2.0
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. PI - 06

Drill Contractor Beylik Drilling Method Hollow Stem Auger Date Drilled 9-13-90

Piez/Casing Size & Type N / A Screened Length/Interval N / A Total Depth 36 ft.

Field Geologist/Technician FW, TL PID X FID ___ Casing Elevation N / A Water Table Depth N / A

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.3 **SLUFF** 0.3 - 1.3 **SILTY CLAY** - dk brn grading to blk slag.		CL	BACK FILLED WITH CEMENT	Not Applicable			16	4,5,6,7	1.3 / 2.0
5	**SILTY CLAY** - dk brn grading to med brn, v slighty plastic, slighty damp.		CL					26	3,8,14,18	2.0
10	**SILTY CLAY** - med dk brn, mottled, grades to silty clay w/ sand: med brn, v fine, v slightly plastic, slightly damp.		CL					39	2,8,9,12	1.3
15	0.0 - 0.5 **SILTY CLAY** - med brn, v fine sand; v slightly plastic, slightly damp. 0.5 - 1.5 **SAND** -med brn, v fine to cs, mode: fine, poor sort; subang to subround; slightly damp.		ML SP					29	S,9,12,15	1.5
20	**SAND** - med rd brn grading to med brn, v fine to med, mode: fine, mod sort, minor gravel to 1/2 inch, grades to finer and damper		SP					23	15,25,30,21	1.8
25	**SAND** - med brn, grades fine to coarse, poor sorted; ang to subround, slightly damp, minor gravel to 1/4".		SP					10	S,25,30,35	1.8
30	0.0 - 0.7 **SAND** - med brn, v fine to cs, mode: med, poor to mod sort, slightly damp. 0.7 - 1.7 **SANDY SILT** - med brn w/ gray mottling, slightly plastic, slightly damp.		SP ML					9	S,6,12,20	1.7
35	0.0 - 0.8 **SANDY SILT** - med brn, w/ dk gray lenses, v fine, v slighty plastic, slightly damp. 0.8 - 1.9 **SILTY CLAY** - med brn w/ gray mottling, slightly plastic, slightly damp.		ML CL						12,15,21,25	1.9
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. PI - 07
Drill Contractor Beylik Drilling Method Hollow Stem Auger Date Drilled 9-13-90
Piez/Casing Size & Type N / A Screened Length/Interval N / A Total Depth 36 ft.
Field Geologist/Technician FW, TL PID X FID ___ Casing Elevation N / A Water Table Depth N / A

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	Unable to sample less than 4.0 feet.			BACK FILLED WITH CEMENT	Not Applicable					0.0 / 2.0
5	**SILTY CLAY** - dk brn, slightly plastic, slightly damp.		CL					36	S,9,12,18	1.6
10	**SILTY CLAY** - med brn, hard, slightly plastic, slightly damp.		CL					17	3,8,16,20	1.4
15	0.0 - 0.8 **SILTY CLAY** - med brn, hard, slightly plastic, slightly damp. 0.8 - 2.0 **SAND** -med brn, v fine to cs, mode: fine to med, poor sort, slightly damp.		CL SP					23	6,10,10,45	2.0
20	**SAND** - med rd brn, grading to med brn, v fine to cs, mode: fine to med, poor sort grading to mod well sort, damp.		SP					62	9,18,21,25	1.7
25	**SAND** - med brn w/ black staining at 1.0 feet, grades fine to coarse, poor to mod sorted, slightly damp.		SP					59	25,50,65,70	1.7
30	0.0 - 0.8 **SAND** - med brn, v fine to cs, mode: cs, poor sort, slightly damp. 0.8 - 1.6 **SILTY CLAY** - med brn, flackey, v slightly plastic, slightly damp, minor gravel to 1/2".		SP CL					38	12,18,21,31	1.6
35	**SILTY CLAY** - med brn, v slightly plastic grading to slightly plastic, slightly damp, minor fine sand, carboniferous lense in shoe.		CL					5	45,30,31,32	2.0
40										

CAMP DRESSER & McKEE INC. Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS - 1
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-18-90
Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'
Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.5 **SANDY SILT** - dk brn & blk, discoloration, moist to damp.		ML					0	3, 5, 7, 15	1.6/ 2.0
	0.5 - 1.2 **SAND** - creamy white, sugar sand, v fine to fine, ang to subrnd.		SP							
	1.2 - 1.6 **SAND & SILT** - black to dk brn, w/ yellow orange sand, vesicular glass foundary material.		ML							
			ML					0	15, 15, 10, 11	1.0
5	**SAND & SILT** - as above. w/ increased yellowish orange sand.		SP ML					0	sluff, 7, 8, 8	1.7
	0.0 - 0.6 **SAND** - lt brn, minor dk brn, v fine to med, ang to subrnd, mod to poolry sorted, moist to damp.									
	0.0 - 1.7 **SANDY SILT** - bl & dk brn, v slightly plastic, damp, v fine to fine sand, fill material.									
10	0.0 - 1.2 **SANDY SILT** - lt brn, non-plastic, v fine sand, damp.		ML	NEAT CEMENT BACKFILL				2	4, 5, 6, 6	1.2
15	0.0 - 0.6 **SANDY SILT** - same as above.		ML					2	8, 12, 16, 22	1.5
	0.6 - 1.5 **SAND** - lt brn, v fine to fine, mod to well sorted, ang to subrnd, damp.		SP							
20	0.0 - 0.7 **SAND** - med brn, v fine to fine, mod to well sorted, moist to damp.		SP					4	12, 35, 30, 37	1.7
	0.7 - 1.7 **SAND** - lt med brn, v fine to coarse, mostly med, minor coarse, mod to poorly sorted.									
25	**SAND** - same as above.		SP					4	sluff, 19, 21, 25	1.7
30	0.0 - 0.7 **SAND** - med to lt brn, fine to coarse, mostly med, poor to mod sorted, damp to moist, rock to 1.5".		SP					2	12, 15, 16, 21	1.2
	0.7- 1.2 **SAND** - med brn, fine to v coarse, poorly sorted, moist.									
35	0.0 - 0.7 **SANDY SILT** - med brn, non-plastic, fine sand, damp.		SM					2	3, 5, 6, 7	2.0
	0.7 - 2.0 **SILTY CLAY** - med brn, slightly plastic, damp.		CL							
40	**SILTY CLAY** - see next page.		CL					0	9, 12, 15, 18	1.5

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS-1
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-18-90
Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'
Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, gray & reddish brown mottling, slightly plastic, v minor rock, damp.		CL	NEAT CEMENT BACKFILL				0	9, 12, 15, 18	1.5
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS - 2
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-18-90
Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'
Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	USCS	Borehole Const.	Lab	FID/PID (ppm)	BLOWS	RECOV.
0–2	0.0 - 0.5 **SAND** - yellowish orange, fine to coarse, mostly med, mod sorted. 0.5 - 1.6 **CLAYEY SILT** - blk & med dk brn, reddish mottling, minor yellow sand as above, slight odor.	SP ML	NEAT CEMENT BACKFILL		4	8, 12, 21, 32	1.6/ 2.0
2–4	0.0 - 0.7 **CLAYEY SILT** - as above but w/ silver gray slag material, dry. 0.7 - 1.7 **SILTY CLAY** - rust, mottling, silver gray, dry.	ML CL		X	3	15, 21, 25, 24	1.6
5	0.0 - 0.4 **SAND** - yellowish orange, fine to coarse, ang to subrnd, mod to poorly sorted, dry. 0.4 - 1.1 **SILTY CLAY** - as above w/out slag. 1.1 - 1.7 **CLAY** - dk brn, slight to mod plastic, fill material, glass fragment, moist.	SP ML CL			9	12, 15, 10, 9	1.7
10	0.0 - 0.4 **SILTY CLAY** - med brn, mod to slightly plastic, minor med sand, minor black staining, moist. 0.4 - 1.1 **SILTY CLAY** - lt brn, slightly plastic, v minor sand, no mottling.	CL			1	4, 5, 6, 7	1.1
15	0.0 - 1.5 **SILTY SAND** - lt green, v fine to med, poor to mod sorted, ang to subrnd, minor nodules of hard silty clay @ 1.6'.	SM		X	8	7, 18, 21, 22	1.8
20	0.0 - 0.6 **SAND** - same as above. 0.6 - 1.8 **SAND** - lt brn, fine to v coarse, poorly sorted.	SP			5	12, 15, 21, 25	1.7
25	0.0 - 1.6 **SAND** - lt gray brn, v fine to med, mod sorted, ang to subrnd, damp.	SP			2	5, 15, 18, 19	1.6
30	0.0 - 0.7 **SAND** - same as above. 0.7- 1.6 **SAND w/ GRAVEL** - med brn, fine to v coarse, poorly sorted, ang to subang, damp, 20% gravel to 1/2".	SP			5	sluff, 19, 25, 45	1.6
35	0.0 - 1.5 **SILTY SAND** - med brn, v fine to fine, mod sorted, ang to subrnd, damp, grading to... 1.5 - 1.9 **SILTY CLAY** - med brn, mod plastic, damp, no mottling.	SM CL			1	sluff, 9, 11, 11	1.9
40	**SILTY CLAY** - see next page.	CL			3	15, 19, 21, 25	1.6

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS-2

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled

Piez/Casing Size & Type Screened Length/Interval Total Depth 41'

Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, reddish mottling, mod to slightly plastic, damp.		CL	NEAT CEMENT BACKFILL				3	15, 19, 21, 25	1.6
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS - 3

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-17-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	FID/PID (ppm)	BLOWS	RECOV.
	SANDY SILT - dk brn to blk, silver gray slag, & yellow orange med sand.	ML	NEAT CEMENT BACKFILL	13	9, 45, 30, 31	1.5/2.0
	0.0 - 0.7 **SILTY CLAY** - dk brn to blk, slightly plastic, white lime?, moist. 0.7 - 1.7 **CLAYEY SILT** - as above but med brn.	CL ML		4	6, 7, 7, 7	1.7
5	**CLAYEY SILT** - med bwn, slightly plastic, mottling throughout, damp.	ML		14	sluff, 4, 7, 7	2.0
10	**SILTY CLAY** - med brn, slightly plastic, grading to some minor sand.	CL			9, 15, 16, 20	
15	0.0 - 1.0 **SILTY CLAY** same as above. 1.0 - 1.5 **SAND** - lt brn, v fine to med, mod to poorly sorted, damp.	CL SP		0	12, 21, 25, 24	1.5
20	**SAND** - same as above.	SP		4	12, 26 28, 30	1.6
25	0.0 - 0.5 **SAND** - same as above grading to ... 0.5 - 1.7 **SAND w/ GRAVEL** - fine to v coarse, poorly sorted, ang to subrnd, moist.	SP		0	25, 40, 45, 50	1.7
30	0.0 - 0.8 **SAND w/ GRAVEL** - same as above. 0.8 - 1.6 **SILTY CLAY** - med brn, mod plastic, damp.	SP CL		0	14, 18, 21, 21	1.6
35	0.0 - 1.0 **SAND** - lt brn, fine to med, mod sorted, ang to subang, slightly damp. 1.0 - 1.7 **CLAY** - med brn, mod to very plastic, damp.	SP CL		0	12, 20, 21, 22	1.7
40	**CLAY** - same as above.	CL			sluff, 15, 18, 21	

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Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS-3

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-17-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	1.0 - 1.7 **CLAY** - med brn, mod to very plastic, damp.		CL	NEAT CEMENT BACKFILL					sluff, 15, 18, 21	
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS - 4

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-17-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SANDY SILT - v dk brn to blk, discolored, damp, reddish yellow sand; minor silver gray sand and glass like slag at 1.0 -1.2'.		ML	NEAT CEMENT BACKFILL				7	9, 8, 9, 11	1.5/2.0
	SILTY CLAY - dk brn, mod plastic, saturated grading to med dk brn, moist.		CL					11	5, 5, 8, 14	2.0
5	0.0 - 0.5 **SILTY CLAY** - dk bwn, mod plastic, silver gray & dk brn slag, moist. 0.5 - 1.8 **SILTY CLAY** - med brn, slightly plastic, damp.		CL					14	sluff, 9, 12, 15	1.8
10	0.0 - 0.3 **SLUFF** 0.4- 1.5 **SILTY CLAY** - med brn, slightly plastic, grading to SILTY SAND - v fine to fine, mod sorted, rnd to subang.		CL					5	sluff, 15, 20, 21	1.5
15	0.0 - 1.2 **SILTY SAND** - same as above. 1.2 - 1.5 **SAND** - lt brn, some reddish brn & gray mottling, v fine to med, mostly fine, mod sort, rnd to subang, damp.		ML SP					2	8, 10, 12, 15	1.5
20	0.0 - 1.5 **SAND** - fine to v coarse, mostly v coarse,~20% gravel, poorly sorted, ang to subrnd, slightly damp. 1.5 - 1.7 **SAND** - med brn, fine to coarse, mostly med, ang to subrnd, mod sorted, slightly damp.		SP					0	19, 25, 40, 50	1.7
25	**SAND** - med lt brn, fine to v coarse, w/ fine gravel, mostly med to coarse, poorly sorted, rnd to subang, gravel to 3/4".		SP					0	15, 25, 30, 31	1.7
30	**SAND w/ GRAVEL** - same as above, 1.2-1.4' SILTY SAND lense.		SP					3	16, 28, 38, 50	1.5
35	**SAND** - lt brn, v fine to fine, mod sorted, damp.		SP					0	12, 19, 21, 21	1.5
40	**SILTY CLAY** - slightly reddish brn, mottling, slightly plastic, damp.		CL						12, 15, 19, 21	

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS-4

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-17-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - slightly reddish brn, mottling, slightly plastic, damp.		CL	NEAT CEMENT BACKFILL					12, 15, 19, 21	
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS - 5

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-20-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.8 **SILTY SAND**- blk, brn, white-cream, fill material, fine to med, poorly sorted, ang to subrnd, rock to 1/2", minor blk silver gray fragments.		SM SP	NEAT CEMENT BACKFILL			X	2	7, 9, 12, 27	1.8/ 2.0
	0.8 - 1.8 **SAND** - blk, no odor, strong discoloration, silver gray foundary sand.		SP ML				X	1	13, 14, 12, 17	1.5
5	0.0 - 0.5 **SAND** - same as above w/ brick to 3". 0.5 - 1.5 **SANDY SILT** - med dk gray brn, v slightly plastic, oily odor, slightly damp.		SM ML				X	0	sluff, 9, 10, 10	1.6
	0.0 - 0.7 **SILTY SAND** - dk brn & blk, w/ cream colored sand, probably foundary sand. 0.7 - 1.6 **CLAYEY SILT** - med dk brn, slightly to non-plastic, minor sand, damp.									
10	0.0 - 0.5 **CLAYEY SILT** - same as above. 0.5 - 1.3 **SILTY CLAY** - lt brn, reddish, non-plastic, damp.		ML CL				X	3	6, 8, 10, 12	1.3
15	0.0 - 0.4 **SILTY CLAY** - same as above, probably sluff. 0.4 - 1.2 **SAND** - med brn, fine to med, mod to poorly sorted, ang to subrnd, moist to damp.		CL SP				X	9	sluff, 6, 9, 10	1.2
20	0.0 - 0.5 **SILTY SAND** - med dk brn, v fine to fine, mod sort, subang to subrnd, non-plastic, damp. 0.5 - 1.5 **SAND** - lt brn, fine to coarse, mostly med, mod to poorly sorted, damp.		SM SP				X	13	8, 11, 17, 23	1.5
25	0.0 - 0.3 **SLUFF** 0.3 - 1.3 **SAND w/ GRAVEL**- lt brn, fine to v coarse, ang to subrnd, damp.		SP				X	11	sluff, 9, 16, 19	1.3
30	0.0 - 0.7 **SAND & GRAVEL** - same as above. 0.7- 1.2 **SANDY SILT** - med brn, v slightly plastic, damp.		SP ML				X	30	sluff, 12, 25, 35	1.2
35	0.0 - 0.6 **SANDY SILT** - same as above. 0.6 -1.8 **SILTY CLAY** - med brn, mod plastic, mod hard, fine blk veins in a 1/4" dendritic pattern, damp.		ML CL				X	0	4, 7, 8, 8	1.8
40	**SILTY CLAY** - see next page.		CL				X	4	sluff, 9, 12,15	1.8

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS-5
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-20-90
Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'
Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, mod plastic, mod hard, heavy gray and reddish brn mottling, damp.		CL	NEAT CEMENT BACKFILL				0	sluff, 9, 12,15	1.8
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS - 6

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-20-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SANDY SILT - blk & dk brn, rock to 1 1/2" thorughout, some reddish brn slity clay & w/ yellow orange sand, vesicular glass foundary material, damp.		ML	NEAT CEMENT BACKFILL				99	9, 12, 15, 16	1.5/ 2.0
	0.0 - 0.8 **SANDY SILT** - same as above. 0.8 - 1.5 **SILTY CLAY** - dk brn, slightly plastic, some white lime material, damp.		ML, CL					140	9, 12, 11, 10	1.5
5	0.0 - 0.8 **SILTY SAND** - dk brn & blk, discolored, some hydrocarbon odor, v fine to coarse, subang to ang, poorly sorted, damp. 0.8 - 1.5 **SANDY SILT** - dk brn, slightly to non-plastic, damp.		SM, ML					59	7, 5, 4, 3	1.5
10	0.0 - 0.3 **SANDY SILT** - same as above. 0.3 - 1.5 **CLAYEY SILT** - lt brn, slightly plastic, damp.		ML, CL					8	sluff, 6, 9, 11	1.5
15	0.0 - 0.6 **SILTY CLAY** - same as above. 0.6 - 1.7 **SAND** - med reddish brn, fine to med, mostly med, mod sorted, ang to subrnd, moist to damp.		CL, SP					20	sluff, 8, 9, 16	1.7
20	0.0 - 0.3 **SAND** - same as above. 0.3 - 1.7 **SAND** - lt brn, fine to coarse, mostly coarse, mod to poorly sorted.		SP					24	sluff, 7, 16 19	1.7
25	0.0 - 0.6 **SAND** - same as above. 0.6 - 1.4 **SAND** - lt brn & yellowish brn, fine to v coarse, poorly sorted, ang to subrnd.		SP					23	sluff, 13, 16, 26	1.4
30	0.0 - 0.7 **SAND & GRAVEL** - lt brn, med to v coarse, poorly sorted, ang to subang, ~30% gravel to 1/4". 0.7- 1.5 **SANDY SILT** - med brn, non-plastic, damp.		SP, ML					20	6, 18, 24, 27	1.5
35	**SILTY CLAY** - med brn, slightly to mod plastic, fine blk vains in a 1/4" dendritic pattern, damp.		CL					3	6, 8, 14, 16	1.8
40	**SILTY CLAY** - same as above w/ gray mottling.		CL					0	9, 11, 12, 16	2.0

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. RS-6

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-20-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, slightly to mod plastic, fine blk vains in a 1/4" dendritic pattern, damp, w/ gray mottling.		CL	NEAT CEMENT BACKFILL				0	9, 11, 12, 16	2.0
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 1

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-19-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
5	0.0 - 0.25 **LOW RECOVERY - SLUFF, SILTY CLAY** - dk brn, sand, gravel to 1/2".		CL	NEAT CEMENT BACKFILL			X	1	sluff, 10, 7, 18	0.25/ 2.0
	NO RECOVERY						X		12, 15, 18, 19	0
10	**LOW RECOVERY SLUFF** - vesicular foundary slag in shoe.						X	2	sluff, 25, 40, 45	0.4
	SILTY CLAY - med brn, v hard, mottled, dk gray vesicular foundary slag, damp.		CL				X	0	25, 30, 35, 40	1.2
15	**SAND** - med brn, fine to med, poorly sorted, ang to subrnd, damp.		SP				X	0	8, 9, 12, 16	0.5
20	0.0 - 0.4 **SILTY CLAY** - med brn, v hard, mottling, damp. 0.4 - 1.2 **SAND** - lt med brn, v fine to coarse, poorly sorted, ang to subang, damp.		CL SP				X	0	9, 15, 18, 25	1.2
25	0.0 - 0.7 **SAND** - reddish brn, fine to med, mostly med, mod to poorly sorted, ang to subrnd, damp, grading to... 0.7 - 1.8 **SAND** - reddish brn, fine to v coarse, poorly sorted, ang to subrnd, yellowish orange sand band.		SP				X		12, 19, 21, 25	1.8
30	0.0 - 0.7 **SILTY CLAY** - med brn, minor mottling. 0.7 - 1.2 **SILTY SAND** - med brn, v fine to fine, well sorted, ang to subrnd, moist to damp.		CL SM				X	0	9, 15, 19, 25	1.2
35	**SILTY SAND** - same as above.		SM				X	0	9, 15, 18, 20	1.8
40	0.0 - 0.6 **SANDY SILT** - see next page.		ML				X		5, 8, 12, 19	1.8

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 1

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-19-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 0.6 **SANDY SILT** - med brn, v fine to fine, mottled, damp, grading to... 0.6 - 1.7 **SILTY CLAY** - med brn, slightly plastic, hard, damp.		CL	NEAT CEMENT BACKFILL					5, 8, 12, 19	
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 2

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-18-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, to blk, non-plastic, minor rock, blue color in shoe, moist.		CL	NEAT CEMENT BACKFILL			X	0	6, 9 13, 18	1.3/ 2.0
	CLAYEY SILT - blk brn, non-plastic, rock to 1", vesicular glass and slag, moist.		ML				X	0	16, 16, 12, 11	1.2
5	0.0 - 0.6 **CLAYEY SILT** - med brn, minor sand, damp, non-plastic. 0.6 - 0.8 **CEMENT** 0.8 - 1.3 **SILTY CLAY** - v hard, non-plastic, friable, damp.		ML CL				X	0	16, 16, 12, 11	1.3
10	0.0 - 0.7 **SILTY CLAY** - dk brn, non-plastic, rock to 1/2". 0.7 - 1.2 **SILTY CLAY** - med reddish brn, v slightly plastic, friable, damp.		CL				X	0	12, 16 19, 20	1.2
15	0.0 - 0.6 **SILTY CLAY** - med reddish brn, slightly plastic, no rock, damp. 0.6 - 1.3 **SAND w/ minor SILT**- lt med brn, v fine to fine, mod to well sorted, subang to rnd, damp.		CL SM				X	1	9, 12, 13, 17	1.3
20	0.0 - 0.8 **SILTY CLAY** - med brn, slightly plastic, moist. 0.8 - 1.2 **SAND** - lt brn, fine to coarse, mod to well sorted, ang to subrnd, damp.		CL SP				X	2	sluff, 9, 18, 21	1.2
25	0.0 - 0.8 **SAND** - same as above. 0.8 - 1.8 **SAND** - med to lt brn, fine to v coarse, poorly sorted, ang to subang, damp.		SP				X	1	13, 29, 30, 35	1.8
30	0.0 - 0.7 **SAND** - same as above. 0.7- 1.3 **SAND** - med brn, v fine to med, mostly fine, mod sorted, rnd to subang, damp.		SP				X	0	9, 12, 15, 22	1.3
35	0.0 - 1.3 **SANDY SILT** - med brn, non-plastic, fine sand, damp.		SM				X	0	9, 8, 9, 10	2.0
40	**SILTY CLAY** - see next page.		CL				X	0	9, 12, 18, 21	1.4

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 2

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-18-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, gray & reddish brown mottling, slightly plastic, v minor rock, damp.		CL	NEAT CEMENT BACKFILL				0	9, 12, 18, 21	1.4
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 3

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-18-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
5	0.0 - 0.7 **SLUFF SANDY SILT** - dk brn & black, minor blue color, foundary material. 0.7 - 1.4 **SILTY CLAY** - med brn, slightly plastic, moist.		ML CL	NEAT CEMENT BACKFILL				1	sluff, 4, 5, 5	1.4/ 2.0
10	**SANDY SILT** - med lt brn, slightly plastic, friable, dry to damp.		ML					2	15, 20, 39, 35	1.3
15	0.0 - 0.4 **SILTY SAND** - same as above. 0.4 - 1.0 **SAND w/ minor SILT** - med brn, v fine, well sorted, rnd to subang, moist to damp.		SM SM					0	8, 9, 10, 12	1.0
20	**SAND** - lt green, fine to coarse, poorly sorted, ang to subrnd, damp.		SP					3	12, 15, 20, 25	1.5
25	0.0 - 0.4 **SAND** - med brn, fine to coarse, poorly sorted, ang to subrnd, minor gravel, moist. 0.4 - 1.8 **SAND w/ GRAVEL** - med gray, fine to v coarse, poorly sorted, ang to subang, gravel to 1/2", moist.		SP					1	25, 40, 50, 50	1.8
30	**SANDY SILT** - med brn, non-plastic, hard, damp.		ML					2	sluff, 12, 20, 28	1.4
35	**SILTY CLAY** - med brn, slightly to mod plastic, gray & brn mottling.		CL					0	sluff, 9, 8, 8	2.0
40	**SILTY CLAY** - same as above.		CL						15, 25, 25, 30	1.4

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB-3

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-18-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - med brn, slightly ot mod plastic, gray & brn mottling.		CL	NEAT CEMENT BACKFILL			X		15, 25, 25, 30	1.4
45										
50										
55										
60										
65										
70										
75										
80										

CLIENT	SOUTHERN CALIFORNIA CHEMICAL	BOREHOLE NO.	SB04	**CAMP DRESSER & MCKEE INC.**	
SITE	PROPOSED FERRIC CHLORIDE AREA	TOTAL DEPTH	49.0 feet	ELEVATION	N. A.
JOB NUMBER	2279-111-TA-PERM	DATE DRILLED	12/15/89	LOGGED BY	S. WALLIN / K. TREIBERG
DRILLING CONTR.	GREGG DRILLING	DRILLING METHOD	HOLLOW-STEM AUGER, MOBIL B-57		

DEPTH (feet)	DESCRIPTION	USCS	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
5	SILT WITH SAND - dark reddish brown, dry, 1-1/2" rock, small 1/8" lime chunks. LAB SAMPLE NO: SCC-SB04-6.0-001	ML	GROUT	NO GROUND WATER ENCOUNTERED	20	38-81	0.7/1.0
10	SAND WITH SILT - medium reddish brown, very fine to medium, moderate to poorly sorted, slightly damp.	SP			0	8-17-20	1.0/1.5
15	SAND - medium reddish brown, very fine to medium-mostly medium, moderate sorting, subrounded to subangular, damp. LAB SAMPLE NO: SCC-SB04-16.0-001	SP			4	7-19	0.6/1.0
20	SAND - medium yellow brown, very fine to medium-mostly medium, moderate sorting, ,subangular to subrounded, slightly damp, trace gravel to 1/2", no odor. LAB SAMPLE NO: SCC-SB04-21.0-001	SP				60-73	1.0/1.0
25	SAND - as above. LAB SAMPLE NO: SCC-SB04-25.5-001	SP				150	0.4/0.5
30	SILT WITH CLAY - medium yellow brown, minor sand, slightly damp, slightly plastic, stiff, slightly damp, no odor. LAB SAMPLE NO: SCC-SB04-31.0-001	ML				25/40/50	1.4/1.5
35	SAND - brown, very fine to very coarse, subangular to subrounded, poorly sorted, slightly damp, minor gravel to 3/8", no odor. LAB SAMPLE NO: SCC-SB04-36.0-001	SP				50/142	1.0/1.0
40							

CAMP DRESSER & MCKEE INC.

CLIENT SOUTHERN CALIFORNIA CHEMICAL SITE PROPOSED FERRIC CHLORIDE AREA BORING NO. SB04

DEPTH (feet)	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	SAND - as above with more fine gravel to 1/6", damp, no odor.	SP							136	0.5/0.5
45										
	SAND - as above, no odor.	SP							109	0.35/0.5
	GRAVEL WITH SAND - 0.0-0.75', brown to dark brown, fine to 1-1/4" gravel (granitic); sand, very fine to very coarse, subrounded to angular, poorly sorted, damp, no odor.	GP							40-62	1.0/1.0
50	CLAY WITH SILT - 0.75-1.0', medium reddish brown, trace sand, stiff, slightly damp, no odor.	CL								
	LAB SAMPLE NO: SCC-SB04-49.0-001									
55	T.D. = 49.0 feet.									
60										
65										
70										
75										
80										

CLIENT SOUTHERN CALIFORNIA CHEMICAL | BOREHOLE NO. SB05 | **CAMP DRESSER & MCKEE INC.**

SITE PROPOSED FERRIC CHLORIDE AREA | TOTAL DEPTH 48.0 feet | ELEVATION N. A.

JOB NUMBER 2279-111-TA-PERM | DATE DRILLED 12/14/89 | LOGGED BY S. WALLIN / B. GROVE

DRILLING CONTR. GREGG DRILLING | DRILLING METHOD HOLLOW-STEM AUGER, MOBIL B-57

Graphic log: Borehole Abandoned — GROUT; Water Level — NO GROUND WATER ENCOUNTERED

DEPTH (feet)	DESCRIPTION	USCS	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
5	CLAY WITH SILT - dark brown, very hard, consolidated, very slightly damp, lime chunks to 1/2", very angular. LAB SAMPLE NO: SCC-SB05-5.5-001	CL	90	40-48	0.7/1.0
10	SAND WITH SILT - dark reddish brown, slightly damp. LAB SAMPLE NO: SCC-SB05-10.5-001	SP	0	22-30	1.0/1.0
15	SAND WITH SILT - as above. LAB SAMPLE NO: SCC-SB05-15.5-001	SP	10	9-14	..
20	SAND WITH SILT - 0.0-0.4 as above. SAND - 0.4-1.0 light brown, very fine to fine, moderate to well sorted, subrounded to subangular, slightly damp. LAB SAMPLE NO: SCC-SB05-20.5-001	SP	0	6-37	1.0/1.0
25	CLAY - dark yellow brown, slightly damp. LAB SAMPLE NO: SCC-SB05-25.5-001	CL	12	17/43	0.6/1.0
30	CLAY WITH SILT - medium brown, slightly damp. LAB SAMPLE NO: SCC-SB05-30.0-001	CL	15	15/40	0.5/1.0
35	SAND - dark yellow orange, very fine to coarse-mostly medium, poorly sorted, subrounded to angular, slightly damp. LAB SAMPLE NO: SCC-SB05-35.5-001	SP		37/70	0.6/1.0
40	SAND - as above, medium, well sorted.	SP		40/107	

CAMP DRESSER & MCKEE INC.

CLIENT SOUTHERN CALIFORNIA CHEMICAL SITE PROPOSED FERRIC CHLORIDE AREA BORING NO. SB05

DEPTH (feet)	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
		SP								
45	SAND - as above.	SP						10	40/107	0.8/1.0
	LAB SAMPLE NO: SCC-SB05-45.5-001									
	SAND - dark reddish brown and dark yellow orange, medium to very coarse, subrounded to angular, slightly damp.	SP						0		
50	T.D. = 48.0 feet.									
55										
60										
65										
70										
75										
80										

CLIENT SOUTHERN CALIFORNIA CHEMICAL | BOREHOLE NO. SB06 | **CAMP DRESSER & MCKEE INC.**

SITE PROPOSED FERRIC CHLORIDE AREA | TOTAL DEPTH 49.0 feet | ELEVATION N. A.

JOB NUMBER 2279-111-TA-PERM | DATE DRILLED 12/14/89 | LOGGED BY S. WALLIN / B. GROVE

DRILLING CONTR. GREGG DRILLING | DRILLING METHOD HOLLOW-STEM AUGER, MOBIL B-57

DEPTH (feet)	DESCRIPTION	USCS	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
5			GROUT	NO GROUND WATER ENCOUNTERED			
	SILT - dark reddish brown, dry, compacted.	ML			60	40-50/4"	0.8/0.8
	LAB SAMPLE NO: SCC-SB06-6.0-001 *Unrecognizable odor at first sample, no noticeable HC odor throughout entire bore.*						
10	SAND WITH SILT - dark reddish brown, dry, minor sand.	SP				43-100	1.0/1.0
	LAB SAMPLE NO: SCC-SB06-11.0-001						
15	SAND - dark reddish brown, very fine to medium, moderate to poorly sorted, round to subangular, dry.	SP				100/6"	0.5/0.5
	LAB SAMPLE NO: SCC-SB06-15.5-001						
20	SAND - as above, slightly coarser.	SP				100/6"	0.5/0.5
	LAB SAMPLE NO: SCC-SB06-21.0-001						
25	SAND - as above, coarser, more angular.	SP				100/3"	0.25/0.25
	LAB SAMPLE NO: SCC-SB06-25.5-001						
30	LAB SAMPLE NO: SCC-SB06-31.0-001						
	SILT WITH CLAY - dark reddish brown, minor sand, slightly damp.	ML				24/90	1.0/1.0
	SAND - dark yellow orange, fine to coarse-mostly medium, poorly sorted, subrounded to angular, trace silt, very slightly damp, trace pebbles, no odor.	SP				30/50	0.6/1.0
35							
	SAND - as above, slightly damp, 5% fine gravel to 1/6", no odor.	SP				100/6"	0.5/0.5
	LAB SAMPLE NO: SCC-SB06-37.0-001						
40							

CAMP DRESSER & MCKEE INC.

CLIENT: SOUTHERN CALIFORNIA CHEMICAL   SITE: PROPOSED FERRIC CHLORIDE AREA   BORING NO.: SB06

DEPTH (feet)	DESCRIPTION	USCS	Lithology	Borehole Abandoned	Water Level	Lab	Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	SAND - as above.	SP					X		100/6"	0.5/0.5
45	LAB SAMPLE NO: SCC-SB06-46.0-001									
	SAND - as above.	SP								
	SILT - reddish brown with very fine sand, moist to damp.	ML				X	X		58/73	1.0/1.0
	SILT - medium brown, damp, hard.	ML					X		46/82	1.0/1.0
50	*Aquitard material from 45.5' to 49.0'.*									
	T.D. = 49.0 feet.									
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 7

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-20-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	CONCRETE									
	SILT - brn, non-plastic, dry.		ML	NEAT CEMENT BACKFILL			X	1	9-12,16, 19	
5	**SILTY CLAY** - intense mod yellow-brn, mulitcolored, v hard, non-plastic, dry.		CL				X	6	17,25, 30,35	
10	0.0 - 0.3 **SILTY CLAY** - dk brn, white cream colored fill, blk foundary glass & silver gray rock pieces to 1/2". 0.3 - 1.6 **SILTY CLAY** - med brn, slightly plastic, blk & cream mottling, damp.		CL				X	34	9,12, 13,15	1.6/2.0
15	0.0 - 1.4 **SILTY CLAY** - med brn, dk brn, cream, blk, heavy mottling,mod hard, minor odor, damp. 1.4 - 1.7 **SILTY SAND** - med brn, v fine to fine, mod to well sorted, gray mottling.		CL, SM				X	68	12,18, 21,21	1.7
20	0.0 - 0.7 **SANDY SILT** - med brn, strong hydrocarbon odor, non-plastic, gray mottling. 0.7 - 1.6 **SAND** - med brn, v fine to fine, mod sorted, ang to subang, damp.		ML, SP				X	241	15,18, 21,25	1.6
25	0.0 - 0.7 **SILTY SAND** - med brn, fine to med, mostly med, poorly sorted, ~10% gravel. 0.7 - 1.6 **SAND** - lt brn, fine to coarse, grading to v coarse at bottom, poorly sorted, damp to moist.		SM, SP				X	110	17,15, 22,28	1.6
30	0.0 - 1.4 **SANDY SILT** - med brn, minor reddish mottling, minor gravel to 1", damp. 1.4 - 1.7 **SILTY SAND** - med brn, reddish mottling, damp.		ML, ML				X	11	sluff,18, 27,32	1.7
35	**SILTY CLAY** - med brn, fine blk veins in a 1/4" dendritic pattern		CL				X	6	7,9,12,12	1.8
40	**SILTY CLAY** - see next page.		CL				X	2	12,18, 21,21	2.0

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 7

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-19-90

Piez/Casing Size & Type ___ Screened Length/Interval ___ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ___ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 2.0 **SILTY CLAY** - med brn, slightly plastic, dry to damp.		CL	NEAT CEMENT BACKFILL				2	2,18, 21,21	2.0
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 8
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-19-90
Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'
Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
5	0.0 - 0.7 **SANDY SILT** - brn & black, minor gravel, damp. 0.7 - 1.4 **SILTY CLAY** - dk brn, heavy mottling, damp.		ML CL	NEAT CEMENT BACKFILL				64	3, 5, 9, 12	1.4/ 2.0
10	**SILTY CLAY** - med brn, mod hard, slightly plastic.		CL					104	9, 12, 18, 22	2.0
15	0.0 - 0.2 **SLUFF, SILTY CLAY** - same as above. 0.2 - 1.2 **SAND** - dk brn, gray & blk, fine to coarse, poorly sorted, ang to subrnd, saturated to moist. Strong hydrocarbon odor.		CL SP					123	12, 19, 21, 30	1.2
20	**SAND** - dk to med gray, and as above w/ minor gravel to 1". Strong hydrocarbon odor.		SP					159	sluff, 15, 25, 40	1.5
25	0.0 - 0.3 **SLUFF** - same as above. 0.3 - 1.5 **SAND** - med to lt gray, fine to coarse, mostly coarse, ang to subang, poorly to mod sorted, damp to moist.		SP					67	sluff, 25, 30, 35	1.5
30	**SILTY CLAY** - grayish greenish brn, slightly to mod plastic, minor gray mottling, minor sand.		CL					66	9, 12, 14, 16	1.6
35	**CLAY** - greenish gray, mod plastic, damp to moist, no odor.		CL					8	sluff, 9, 12, 15	2.0
40	**CLAY w/ minor SILT** - see next page.		CL					1	8, 9, 11, 14	2.0

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. SB 8

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-19-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 41'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	SILTY CLAY - blue green gray, gray mottling, mod plastic, moist, no hydrocarbon odor.		CL	NEAT CEMENT BACKFILL				1	8, 9, 11, 14	2.0
45										
50										
55										
60										
65										
70										
75										
80										

CLIENT: SOUTHERN CALIFORNIA CHEMICAL | BOREHOLE NO.: UST-SB01 | **CAMP DRESSER & MCKEE INC.**

SITE: UNDERGROUND STORAGE TANK | TOTAL DEPTH: 36.7 feet | ELEVATION: N. A.

JOB NUMBER: 2279-111-TA-PERM | DATE DRILLED: 12/15/89 | LOGGED BY: S. WALLIN / K. TREIBERG

DRILLING CONTR.: GREGG DRILLING | DRILLING METHOD: HOLLOW-STEM AUGER, MOBIL B-57

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	SLANT BORING - 28° FROM VERTICAL			GROUT	NO GROUND WATER ENCOUNTERED				NO BLOW COUNTS AVAILABLE (Slant Boring)	
5/4.4	CLAY WITH SILT - dark grayish brown, stiff, slightly damp, slight HC odor and discoloration.	CL					X	5		0.65/1.0
10/8.8	CLAY WITH SILT - as above with strong HC odor and more HC staining than previous sample. LAB SAMPLE NO: SCC-UST-SB01-11.0-001 VERTICAL DEPTH: 9.71'	CL				X	X	200		0.8/1.0
15/13.2	SAND - dark grayish brown, very fine to medium-mostly medium, moderately sorted, slightly damp, strong HC odor and discoloration.	SP					X	400		1.4/1.5
20/17.7	SAND - medium grayish brown, very fine to coarse, subangular to subrounded, poorly sorted, strong HC odor and discoloration. LAB SAMPLE NO: SCC-UST-SB01-21.5-001 VERTICAL DEPTH: 18.98'	SP				X	X	400		1.4/1.5
25/22.1	SAND - as above, very fine to medium-mostly medium, slight HC odor and discoloration.	SP					X	10		1.3/1.5
30/26.5	SILT AND CLAY - medium olive gray, minor fine sand, stiff, slightly damp, slight HC odor and possible discoloration. LAB SAMPLE NO: SCC-UST-SB01-31.5-001 VERTICAL DEPTH: 27.81'	CL				X	X	10		1.5/1.5
35/30.9	SILT AND CLAY - medium olive gray, minor fine sand, stiff, slightly damp, very slight HC odor, no discoloration. LAB SAMPLE NO: SCC-UST-SB01-36.0-001 VERTICAL DEPTH: 31.7'	CL				X	X	50		1.5/1.5
40/35.3										

CAMP DRESSER & MCKEE INC.

CLIENT SOUTHERN CALIFORNIA CHEMICAL SITE UNDERGROUND STORAGE TANK BORING NO. UST-SB01

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	CLAY WITH SILT - grayish olive, slightly damp, no HC odor.	CL						0		1.5/1.5
	LAB SAMPLE NO: SCC-UST-SB01-41.5-001 VERTICAL DEPTH: 36.64'									
45/39.7										
50										
55										
60										
65										
70										
75										
80										

CLIENT SOUTHERN CALIFORNIA CHEMICAL | BOREHOLE NO. UST-SB02 | **CAMP DRESSER & MCKEE INC.**

SITE UNDERGROUND STORAGE TANK | TOTAL DEPTH 35.8 feet | ELEVATION N. A.

JOB NUMBER 2279-111-TA-PERM | DATE DRILLED 12/27/89 | LOGGED BY S. WALLIN / K. TREIBERG

DRILLING CONTR. GREGG DRILLING | DRILLING METHOD HOLLOW-STEM AUGER, MOBIL B-57

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	SLANT BORING - 28° FROM VERTICAL			GROUT	NO GROUND WATER ENCOUNTERED				NO BLOW COUNTS AVAILABLE (Slant Boring)	
5/4.4	CLAY - dark brown with black mottling, minor coarse sand and silt, slightly damp, moderately plastic, medium HC odor.	CL					X	300		1.0/1.0
10/8.8	CLAY - 0.0-0.5 feet, as above. 0.5-1.2 feet, reddish brown, trace silt, no sand, very slightly damp. LAB SAMPLE NO: SCC-UST-SB02-11.0-001 VERTICAL DEPTH: 9.71' LAB SAMPLE NO: SCC-UST-SB02-11.5-001 VERTICAL DEPTH: 10.15'	CL				▨	X	130		1.2/1.5
15/13.2	SAND WITH SILT - dark grayish brown, very fine to medium-mostly medium, moderately sorted, subangular to subrounded, slightly damp, strong HC odor and discoloration. VERTICAL DEPTH: 14.57' LAB SAMPLE NO: SCC-UST-SB02-16.5-001	SP				▨	X	800		1.2/1.5
20/17.7	SAND - medium olive gray, fine to very coarse, trace gravel, subangular to subrounded, poorly sorted, damp, strong HC odor and discoloration. LAB SAMPLE NO: SCC-UST-SB02-20.5-001 VERTICAL DEPTH: 18.1'	SP				▨	X	725		1.5/1.5
25/22.1	SAND - 0.0-1.0 feet, as above. 1.0-1.35 feet, dark grayish brown, very fine to medium, subangular to subrounded, moderate sorting, appears to be more HC stained and saturated than 0.0-1.0 interval, strong HC odor.	SP					X	925 1050		1.35/1.5
30/26.5	SAND - light olive gray, fine to very coarse, minor gravel to 1/2", subangular to subrounded, poorly sorted, slightly damp, medium to strong HC odor. SILT AND CLAY - medium olive gray, minor sand and fine gravel, strong HC odor and discoloration. LAB SAMPLE NO: SCC-UST-SB02-30.5-001 VERTICAL DEPTH: 26.93'	SP CL				▨	X	725 825		1.3/1.5
35/30.9	CLAY - light olive gray, minor silt and sand, stiff, slightly damp, very slight HC odor. LAB SAMPLE NO: SCC-UST-SB02-35.5-001 VERTICAL DEPTH: 31.34'	CL				▨	X	80		1.45/1.5
40/35.3	CLAY - light olive green, as above, no HC odor.	CL					X	40		1.5/1.5

CAMP DRESSER & MCKEE INC.

CLIENT SOUTHERN CALIFORNIA CHEMICAL   SITE UNDERGROUND STORAGE TANK   BORING NO. UST-SB02

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	LAB SAMPLE NO: SCC-UST-SB02-40.5-001 VERTICAL DEPTH: 35.76' T.D.= 35.8 feet.	CL								
45/39.7										
50										
55										
60										
65										
70										
75										
80										

CLIENT SOUTHERN CALIFORNIA CHEMICAL BOREHOLE NO. UST-SB03 **CAMP DRESSER & MCKEE INC.**

SITE UNDERGROUND STORAGE TANK TOTAL DEPTH 37.3 feet ELEVATION N. A.

JOB NUMBER 2279-111-TA-PERM DATE DRILLED 12/16/89 LOGGED BY S. WALLIN / K. TREIBERG

DRILLING CONTR. GREGG DRILLING DRILLING METHOD HOLLOW-STEM AUGER, SIMCO 2400 SK-1

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	SLANT BORING - 23° FROM VERTICAL			GROUT	NO GROUND WATER ENCOUNTERED				NO BLOW COUNTS AVAILABLE (Slant Boring)	
5/4.6	CLAY WITH SILT - dark olive brown with dark slate gray interval, slight HC odor and discoloration.	CL					X	180		
10/9.2	CLAY WITH SILT - dark yellowish brown, very stiff, slightly damp, moderate HC odor. LAB SAMPLE NO: SCC-UST-SB03-10.5-001 VERTICAL DEPTH: 9.66'	CL				X	X	150		1.3/1.5
15/13.8	SAND - medium olive gray, very fine to medium, moderately sorted, subangular to subrounded, damp, strong HC odor and discoloration.	SP					X	400		1.0/1.3
20/18.4	CLAY WITH SILT - 0.0-0.7' medium olive gray, minor sand and trace gravel to 1/4". SAND - 0.7-1.1' olive gray, very fine to coarse, subangular to subrounded. Whole sample has strong HC odor and discoloration. LAB SAMPLE NO: SCC-UST-SB03-20.5-001 VERTICAL DEPTH: 18.87'	CL SP				X	X	310		1.1/1.5
25/23.0	SAND - medium olive green, very fine to very coarse, minor gravel to 3/8", poorly sorted, subangular to subrounded, strong HC odor. LAB SAMPLE NO: SCC-UST-SB03-25.0-001 VERTICAL DEPTH: 23.01'	SP				X	X	400		
30/27.6	SILT - light olive green, trace sand, stiff, slightly damp, medium HC odor. LAB SAMPLE NO: SCC-UST-SB03-30.5-001 VERTICAL DEPTH: 28.08'	ML				X	X	350		
35/32.2	SILT - light olive green, trace sand, slightly damp, strong HC odor. LAB SAMPLE NO: SCC-UST-SB03-35.0-001 VERTICAL DEPTH: 32.22'	ML				X	X	350		1.0/1.0
40/36.8	CLAY WITH SILT - light olive gray, no HC odor.	CL				X	X			

CAMP DRESSER & MCKEE INC.

CLIENT SOUTHERN CALIFORNIA CHEMICAL SITE UNDERGROUND STORAGE TANK BORING NO. UST-SB03

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	LAB SAMPLE NO: SCC-UST-SB03-40.0-001 VERTICAL DEPTH: 36.82'	CL						0		
	LAB SAMPLE NO: SCC-UST-SB03-40.5-001 VERTICAL DEPTH: 37.28'									
45/41.4										
	T.D. = 37.3 feet.									
50										
55										
60										
65										
70										
75										
80										

CLIENT: SOUTHERN CALIFORNIA CHEMICAL | BOREHOLE NO.: UST-SB04 | **CAMP DRESSER & MCKEE INC.**

SITE: UNDERGROUND STORAGE TANK | TOTAL DEPTH: 37.3 feet | ELEVATION: N. A.

JOB NUMBER: 2279-111-TA-PERM | DATE DRILLED: 12/16/89 | LOGGED BY: S. WALLIN / K. TREIBERG

DRILLING CONTR.: GREGG DRILLING | DRILLING METHOD: HOLLOW-STEM AUGER, SIMCO 2400 SK-1

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	PID (ppm)	RECOV. / ADV. (feet)
	SLANT BORING - 23° FROM VERTICAL			
5/4.6	CLAY WITH SILT - 0-0.5' dark olive green brown, 0.5-1.0' dark slate gray brown, minor sand and gravel to 1/4", damp, slight HC odor and discoloration.	CL	240	1.3/1.5
10/9.2	CLAY - moderate yellow brown, trace silt, very stiff, slightly damp, medium HC odor and staining.	CL	200	1.2/1.5
	LAB SAMPLE NO: SCC-UST-SB04-11.0-001 VERTICAL DEPTH: 10.12'			
15/13.8	SAND - medium olive gray, very fine to medium, moderately sorted, subangular to subrounded, damp, strong HC odor and discoloration.	SP	300	1.4/1.5
20/18.4	SAND - as above, very fine to very coarse, poorly sorted, strong HC odor and discoloration.	SP	290	
	LAB SAMPLE NO: SCC-UST-SB04-20.0-001 VERTICAL DEPTH: 18.41'			
	LAB SAMPLE NO: SCC-UST-SB04-20.5-001 VERTICAL DEPTH: 18.87'			
25/23.0	SAND - as above, less coarse, strong HC odor and discoloration.	SP	290	1.3/1.3
30/27.6	SAND WITH GRAVEL - medium olive green, very fine to very coarse, gravel to 1/2", subangular to subrounded, poorly sorted, 0.5-0.8 sand above clay is wet and shiney.	SP	310	
	CLAY WITH MINOR SILT - dark olive green gray. Whole sample has strong HC odor and discoloration.	CL	320	1.0/1.0
	LAB SAMPLE NO: SCC-UST-SB04-30.0-001 VERTICAL DEPTH: 27.62'			
35/32.2	CLAY WITH SILT - dark olive gray, moderate HC odor.	CL	210	1.3/1.5
	LAB SAMPLE NO: SCC-UST-SB04-35.0-001 VERTICAL DEPTH: 32.22'			
	LAB SAMPLE NO: SCC-UST-SB04-35.5-001 VERTICAL DEPTH: 32.68'			
40/36.8	CLAY WITH SILT - light olive gray, no HC odor.	CL		

GRAPHIC LOG — Lithology; Borehole Abandoned: GROUT; Water Level: NO GROUND WATER ENCOUNTERED

SAMPLES — Lab; Lith

BLOW COUNT (per 6" interval): NO BLOW COUNTS AVAILABLE (Slant Boring)

CAMP DRESSER & MCKEE INC.

CLIENT SOUTHERN CALIFORNIA CHEMICAL SITE UNDERGROUND STORAGE TANK BORING NO. UST-SB04

DEPTH (ft) measured/vertical	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	LAB SAMPLE NO: SCC-UST-SB04-40.5-001 VERTICAL DEPTH: 37.28' T.D. = 37.3 feet.	CL						30		1.5/1.5
45/41.4										
50										
55										
60										
65										
70										
75										
80										

CLIENT SOUTHERN CALIFORNIA CHEMICAL | BOREHOLE NO. UST-SB05 | **CAMP DRESSER & MCKEE INC.**

SITE UNDERGROUND STRORAGE TANK | TOTAL DEPTH 40.5 feet | ELEVATION N. A.

JOB NUMBER 2279-111-TA-PERM | DATE DRILLED 12/27/89 | LOGGED BY S. WALLIN / K. TREIBERG

DRILLING CONTR. GREGG DRILLING | DRILLING METHOD HOLLOW-STEM AUGER, MOBIL B-57

DEPTH (feet)	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
5	CLAY - 0.0-0.6 feet with silt, dark gray brown, minor sand, trace fine gravel, root hairs, damp, stiff, moderate HC odor and discoloration; 0.6-1.25 feet with sand, dark yellow brown, minor silt, slightly damp, moderate HC odor. LAB SAMPLE NO: SCC-UST-SB05-5.5-001	CL		GROUT	NO GROUND WATER ENCOUNTERED			550	9-25-34	1.25/1.5
10	CLAY WITH SAND - dark yellow brown, dry, very compact, strong HC odor. LAB SAMPLE NO: SCC-UST-SB05-10.5-001	CL						250	20-30-50	0.8/1.5
15	SAND - light olive gray, minor gravel to 1/4", very fine to very coarse, subangular to rounded, poorly sorted, strong HC odor, top of interval moist with product (oily residue).	SP						700	20-25-40	1.5/1.5
20	SAND - light olive gray, very fine to medium, angular to subrounded-mostly medium, trace gravel to 1/2", moderate sorting, strong HC odor. LAB SAMPLE NO: SCC-UST-SB05-20.0-001	SP						500	20-45-60	1.5/1.5
25	SAND - 0.0-1.0 feet, light olive gray, fine to coarse, trace gravel to1/4", trace clay balls, subangular to subrounded, poorly sorted; 1.0-1.4 feet, sand with clay, medium brown, very fine to very coarse, minor gravel to 1/2", subangular to subrounded, poorly sorted, damp, whole sample strong HC odor.	SP						150/ 350	35-45-40	1.4/1.5
30	CLAY WITH SILT - medium olive gray, minor fine sand, slightly damp, slight HC odor. LAB SAMPLE NO: SCC-UST-SB05-30.5-001	CL						30	12-28-40	1.2/1.5
35	CLAY WITH SILT - as above, no HC odor. LAB SAMPLE NO: SCC-UST-SB05-35.5-001	CL						10	18-30-45	1.2/1.5
40	CLAY WITH SILT - as above, no HC odor.	CL						4	9-18-25	1.4/1.5

CAMP DRESSER & MCKEE INC.

CLIENT SOUTHERN CALIFORNIA CHEMICAL SITE UNDERGROUND STRORAGE TANK BORING NO. UST-SB05

DEPTH (feet)	DESCRIPTION	USCS	GRAPHIC LOG: Lithology	GRAPHIC LOG: Borehole Abandoned	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	PID (ppm)	BLOW COUNT (per 6" interval)	RECOV. / ADV. (feet)
	LAB SAMPLE NO: SCC-UST-SB05-40.5-001 T.D. = 40.5 feet.	CL								
45										
50										
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. UST-SB 6

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-24-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 36'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
0	0.0 - 0.5 **CONCRETE**			NEAT CEMENT BACKFILL						
5	0.0 - 0.5 **SILTY SAND** - foundary material sand, reddish brn, v fine to med, poorly sorted, ang to subang, damp. 0. - 1.4 **SILTY CLAY** - dk brn & blk, strong oily odor, semi plastic, black staining.		SM CL				X	148	sluff, 5 4, 3	1.4/ 2.0
10	0.0 - 1.4 **CLAY** - med brn, hard, non-plastic, smears well, dark brn shiny mottling, crumbles easily.		CL				X	311	9, 12, 11, 13	1.4
15	0.0 - 0.2 **SLUFF, SILT** - may be contact. 0.2 - 1.2 **SAND** - med gray brn, v fine to med, mostly fine, ang to subrnd, mod sort, some silt, strong hydrocarbon odor.		ML SP				X	493	sluff, 9, 12, 15	1.8
20	0 0 - 2.0 **SAND** - dine to coarse, poorly sorted, minor gravel to 1/4", Strong hydrocarbon odor, saturated.		SP				X	306	5, 5, 7, 12	
25	0.0 - 1.5 **SAND** - same as above.		SP				X	276	12, 18 21,34	1.8
30	0.0 - 0.5 **SAND** - same as above. 0.5 - 1.7 **SANDY SILT** - med grayish olive brn, v fine to med, mod-poorly sorted, ang to subrnd.		SP ML				X	109	18, 21, 25, 30	1.7
35	0.0 -1.8 **SILTY CLAY w/ minor SAND** - grayish olive brn, slightly plastic, damp; v fine minor sand.		CL				X	3	9, 12, 18, 18	1.8
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log - UST-SB 7

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. 30 deg slant

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-21-90

Piez/Casing Size & Type ____ Screened Length/Interval ____ Total Depth 38.9'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ____ Water Table Depth ~53'

DEPTH of slant (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
5/4.3				NEAT CEMENT BACKFILL					Five foot continuous sampler - No Blows	
10/8.6	0.0 - 1.5 **SILTY CLAY** - v dk brn & stained blk, mod plastic to v plastic, oily feel. 1.5 - 4.5 **SILTY CLAY** - med brn, mod to slightly plastic, heavily mottled brn and dark gray, slight to mod hydrocarbon odor.		CL					153 111		4.5/ 5.0
15/12.9	No sample									
20/17.3	0.0 - 1.5 SAND - dk brn, dk gray, visually contaminated,v fine to med, mostly med, mod sorted, ang to subang, moist 1.5 - 2.0 SAND - as above but not gray discolored, v fine to med, mostly med, mod sorted, ang to subrnd, moist.		SP					>500		2.0/2.0
25/21.7	0 0 - 1.0 **SAND** - med gray brn, discolored, fine to coarse, poorly sorted, ang to subrnd; ~10% gravel to 1/2"; strong hydrocarbon odor.		SP					250		1.0/2.0
30/25.9	0.0 - 1.0 **SAND** - as above. 1.0 - 2.0 **SAND** gray brn, v fine to med, mostly med, mod sorted, ang to subrnd, moist, obviously oil contaminated, strong odor.		SP SP					341		2.0/2.0
35/30.3	0.0 - 2.0 **SAND** - med brn-gray, disc olored, hydrocarbon odor, ang to subrnd, fine to coarse mostly med, poor to mod sorted.		SP					335		2.0/2.0
40/34.4	0.0 - 5.0 **SILTY CLAY** - grayish olive brn, damp, non to slightly plastic, friable, easly broken, gray mottling.		CL					116		5.0/5.0

CAMP DRESSER & McKEE INC.

Soil Boring Log - UST-SB 7

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. 30 deg slant

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-21-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 38.9'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 1.4 **SILTY CLAY** - grayish olive brn, damp, non to slightly plastic, friable, easly broken, gray mottling.		CL	NEAT CEMENT BACKFILL				65	Five foot continuous sampler - No Blows	5.0/5.0
	1.4 - 3.3 **CLAYEY SANDY SILT** - med brn, damp, friable, non to slightly plastic.							15 7		
45/38.9	3.3 - 5.0 **CLAYEY SANDY SILT** - grayish olive brn, mottled grays, hard, v minor odor.		ML					39 9		
50	TOTAL DEPTH 38.9 feet									
55										
60										
65										
70										
75										
80										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. UST-SB 9

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-24-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 36'

Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 0.5 **CONCRETE**									
5	No sample - cuttings **SILTY CLAY** - med brn, non-plastic, damp - dry.		CL				X			
		?		NEAT CEMENT BACKFILL						
10	0.0 - 0.4 **SILTY CLAY sluff** - dk brn, wet. 0.4 - 1.4 **SILTY CLAY** - med brn, lt brn mottling w/ blk 1/4" lines through out, v minor sand.		CL			X	X	8	sluff, 9, 17, 25	1.4/ 2.0
15	0.0 - 0.2 **SLUFF, SILTY CLAY** - dk brn. 0.2 - 0.7 **SILTY CLAY** - med brn, slightly plastic, brn & blk mottling, damp. 0.7 - 1.4 **SAND** - med brn, fine to med, mod to poorly sorted, damp to moist, ang to subrnd, minor hydrocarbon odor.		CL SP				X	32	sluff, 9, 15, 30	1.6
20	0.0 - 0.7 **SAND** - same as above. 0.7 - 1.7 **SAND** - med - lt brn, ang to subrnd, fine to v coarse, poorly sorted, moist; minor gravel to 1/4".		SP			X	X	42	sluff, 19, 25, 30	1.7
25	0.0 - 0.6 **SAND** - same as above. 0.6 - 1.7 **SAND** - dk gray black, fine to coarse, much med, v moist, ang to subrnd, poorly sorted, strong hydrocarbon odor.		SP				X	151	19, 20, 25, 30	1.7
30	0.0 - 0.4 **SAND** - same as above, possible sluff. 0.4 - 1.7 **SANDY CLAYEY SILT** - med brn, v fine sand, v slightly damp.		SP ML			X	X	29	sluff, 5, 9, 12	1.7
35	0.0 - 2.0 **SANDY CLAYEY SILT** - same as above but increased clay.		ML			X	X	3	sluff, 9, 12, 14	2.0
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. UST-SB 10
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-24-90
Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 36'
Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	Lithology	USCS	Borehole Const.	Water Level	Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
0	0.0 - 0.5 **CONCRETE**			NEAT CEMENT BACKFILL						
5	0.0 - 0.5 **SLUFF** 0.5 - 1.6 **SILTY CLAY** - med dk brn, slightyly to semi-plastic, damp to moist, roots.		CL				X	336	sluff, 3, 5, 8	1.6/2.0
10	0.0 - 0.3 **SLUFF** 0.3 - 0.6 **SILTY CLAY** - as above. 0.6 - 1.6 **SILTY CLAY** - med redish brn, damp, v slightly plastic, hard.		CL			X	X	351	sluff, 15, 21, 25	1.6
15	0.0 - 0.4 **SILTY CLAY** - same as above. 0.4 - 1.4 **SAND** - grayish brn, strong hydrocarbon odor, oily feel, near saturation, moist, fine to coarse, poorly sorted, ang to subrnd.		CL SW				X	368	sluff, 6, 8, 9	1.4
20	0.0 - 1.7 **SAND** - same as above, at 0.9 color changed to lt gray brn.		SW			X	X	368	sluff, 6, 8, 9	1.4
25	0.0 - 1.4 **SAND** - same as above.		SW				X	252	sluff, 19, 25, 35	1.4
30	0.0 - 0.1 **SAND** - same as above, probably sluff. 0.1 - 1.5 **SANDY SILT** - grayish olive brn, non to v slightly plastic, moist, slight hydrocarbon odor.		SW ML			X	X	16	sluff, 15, 19, 20	1.5
35	0.0 - 1.7 **SILTY CLAY**- grayish olive brn, damp to moist, slightly plastic.		ML			X	X	3	sluff, 9, 12, 16	1.7
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. UST-SB 11
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-21-90
Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 36'
Field Geologist/Technician BG, FW PID X FID ____ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: USCS	GRAPHIC LOG: Borehole Const.	GRAPHIC LOG: Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/PID (ppm)	BLOWS	RECOV.
	0.0 - 0.5 **CONCRETE**									
5	0.0 - 0.5 **SILTY CLAY** - dk brn & blk, minor yellow orange foundary sand, damp to moist, slightly plastic,		CL	NEAT CEMENT BACKFILL			X	336	sluff, 3, 5, 8	1.6/2.0
10	0.0 - 0.7 **SILTY CLAY** - dk brn & blk, w/ out minor yellow orange foundary sand, damp to moist, slightly plastic, hydrocarbon odor. 0.7 - 1.4 **SILTY CLAY** - med redish brn, damp, slightly plastic, v hard.		CL				X	351	sluff, 15, 21, 25	1.6
15	0.0 - 0.4 **SILTY CLAY** - same as above. 0.4 - 1.4 **SAND** - grayish brn, strong hydrocarbon odor, oily feel, near saturation, moist, fine to coarse, poorly sorted, ang to subrnd.		CL SW				X	368	sluff, 6, 8, 9	1.4
20	0.0 - 1.7 **SAND** - same as above, at 0.9 color changed to lt gray brn.		SW				X	368	sluff, 6, 8, 9	1.4
25	0.0 - 1.4 **SAND** - same as above.		SW				X	252	sluff, 19, 25, 35	1.4
30	0.0 - 0.1 **SAND** - same as above, probably sluff. 0.1 - 1.5 **SANDY SILT** - grayish olive brn, non to v slightly plastic, moist, slight hydrocarbon odor.		SW ML				X	16	sluff, 15, 19, 20	1.5
35	0.0 - 1.7 **SILTY CLAY**- grayish olive brn, damp to moist, slightly plastic.		ML				X	3	sluff, 9, 12, 16	1.7
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. WMU 46B
Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-24-90
Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 36'
Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	SAMPLES: Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.5 **ASPHALT** - black and gray, dry, nonplastic, minor odor - unlknown. 0.5 - 0.6 **ASPHALT**		CL	NEAT CEMENT BACKFILL				56	5,7,7,11	2.0/ 2.0
	0.6 - 1.2 **SILTY CLAY** - med dk brn, dry , w/ gravel. 1.2 - 2.0 **SILTY CLAY** - dk brn, mettled med bwn, damp to dry.		CL					301	S,5,7,6	1.8
5	0.0 - 0.8 **SILTY CLAY** - same as above, w/ minor sand. 0.8 - 1.8 **SILTY CLAY** - blk and brn, damp, slightly plastic, bad strong hydrocarbon old oil smell.		CL CL					222	S,5,6,5	2.0
10	0.0 - 0.5 **ASPHALT** 0.5 1.5 **SILTY CLAY w/ GRAVEL** - dk brn, slightly plastic. 1.5 - 2.0 **SILTY CLAY** - med brn, greenish gray motlling, hard.		CL					201	S,15,20, 20	1.5
15	0.0 - 0.5 - **ASPHALT and SILTY CLAY** 0.0 -1.5 - SILTY CLAY - med brn, slightly plastic, minor v coarse sand, oil along side of sample, hydrocarbon odor.		CL							
	0.0 - 0.5 **SILTY CLAY** - as above. 0.5 - 1.5 **SAND** - fine to v coarse, poorly sorted, ang to subrnd, saturated oily sand, minor gravel to 1/4".		SP					337	19,12, 15,18	1.5
20	**SAND** - grayish brn, v fine to coarse, poorly sorted, ang to subrnd, moist, strong hydrocarbon odor.		SP					218	S,18 24,28	2.0
25	**SAND** - as abouve but lt gray brn, saturated, oily odor.		SP					259	19,12, 15,40	2.0
30	**CLAYEY SANDY SILT** - grayish olive brn, v slighty plstic, damp.		ML					103	9,12, 15,20	2.0
35	**SILTY CLAY** - grayish olv brn, slighty plastic, damp, gray mottiling, good aquitard material.		CL					7	9,12, 13,14	2.0
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. WMU 46C

Drill Contractor CDM Drilling Method Hand Augered Date Drilled 8-23-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 6.0'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/PID (ppm)	BLOWS	RECOV.
	2.0 - 3.0 CLAYEY SILT - red brn, damp.		ML	NEAT CEMENT BACKFILL					NOT APPLICABLE	NOT APPLICABLE
	3.0 - 3.5 CLAYEY SILT - as above except damper.							0		
5	3.5 - 4.5 SILTY CLAY - dk brn, slightly plastic.		CL							
	4.5 - 5.0 SILTY CLAY - med brn, sand portion - fine, v slightly plastic, slightly moist.							13		
	5.0 - 6.0 SILTY CLAY - same as above, blocky texture with red flecks, v slightly moist, slightly plastic.									
10										
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. WMU 46D
Drill Contractor CDM Drilling Method Hand Augered Date Drilled 8-23-90
Piez/Casing Size & Type Screened Length/Interval Total Depth 31'
Field Geologist/Technician BG, FW PID X FID Casing Elevation Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.3 **GRAVEL**		SP							
	0.3 - 1.8 **SILTY SAND** - dk red brn, v fine to fine, slighty moist, grading to med brn, gravel fraction with asphalt and wood chunks.		SP	NEAT CEMENT BACKFILL			X	0	NOT APPLICABLE	NOT APPLICABLE
5										
10										
15										
20										
25										
30										
35										
40										

CAMP DRESSER & McKEE INC.

Soil Boring Log -

Client Southern California Chem. Site Santa Fe Springs Job No. 2279-111-FI-FDPG Soil Bore/ Well No. WMU 46E

Drill Contractor Beylik Drilling Method Hollow Stem Auger - 8" Diam. Date Drilled 9-19-90

Piez/Casing Size & Type ______ Screened Length/Interval ______ Total Depth 31'

Field Geologist/Technician BG, FW PID X FID ___ Casing Elevation ______ Water Table Depth ~53'

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	USCS	Borehole Const.	Water Level	SAMPLES: Lab	Lith	FID/ PID (ppm)	BLOWS	RECOV.
	0.0 - 0.5 **SILT** - lt to med brn, hard, non-plastic, dry. 0.5 - 1.5 **SILT** - dk brn, non-plastic, gravel to1", hard, dry.		ML					153	7, 13, 30, 40	1.5/ 2.0
	SILT & ROCK - dk & lt brn, v slightly plastic, vesicular foundary slag.		ML					140	48, 50, 51, 52	1.5
5	0.0 - 0.5 **SILT & ROCK** - same as above. 0.5 - 1.6 **SILT & CLAY** - reddish brn, v slightly plastic, reddish mottling, dry.		ML CL					90	12, 28, 30, 34	1.6
10	**SILTY CLAY** - greenish brnish gray, w/ mottling, slightly plastic, damp.		CL	NEAT CEMENT BACKFILL				0	8, 9, 11, 12	1.5
15	**SAND** - lt brn, grayish, fine to coarse, poorly sorted, moist to damp.		SP					14	12, 24, 31, 40	1.3
20	**SAND** - same as above.		SP					15	12, 19, 25, 30	1.7
25	0.0 - 0.5 **SAND** - same as above. 0.5- 1.6 **SANDY SILT** - greenish brn, v slightly plastic, gray mottling, damp.		SP ML					20	12, 18, 21, 30	1.6
30	**SANDY SILT** - greenish brn, v slightly plastic, damp.		ML					0	19, 23, 25, 25	2.0
35										
40										

Lithlog Key

Lithology Symbols:

Abbreviations:

ang - angular
approx - approximately
B - background reading
brn - brown
dk - dark
diam - diameter
ft - feet
lt - light
med - medium
mod - moderate
olv - olive
rec - recovery
S - soil reading
subang - subangular
subrnd - subround
TPH - total petroleum hydrocarbon
yel - yellow

Camp Dresser & McKee Inc.

nt: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: MW16

Drilling Contractor: Beylik Date Began: 3/17/92 Date Finished: 3/17/92

Drilling Equipment: NA Screened Length/Int: 42'-62' Total Depth: 65 ft.

Drilling Method: Hollow Stem Auger Casing Elev. 150.22 GW Depth: 51 ft.

Casing Size & Type: sch 40 PVC, 2" diam. Ref. Point.: ground surface Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00						Concrete					
5.00			10, 17, 23	1.2/ 1.5		SILTY CLAY, dk yel brn, 10YR4/2, non-plastic, damp, some black staining, moist.	CL			10	123
10.00		LAB	15, 21, 27	1.5/ 1.5		SILTY CLAY, mod brn, 5YR4/4, nonplastic, slightly moist, 10 - 15% silt, minor sand.	CL			10	7150
15.00			16, 19, 25	1.2/ 1.5		SILTY CLAY, as above.	CL			10	35.4
						SAND, mod brn, coarse to fine grained, poorly sorted, ang to subround, slight odor.	SW				
0.00			--	0.8/ 1.5		SAND, mod brn, med to fine grained, poorly sorted, ang to subround, slight odor.	SW			10	900
.00											

Camp Dresser & McKee Inc.

ent: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: MW16

Drilling Contractor: Beylik Date Began: 3/17/92 Date Finished: 3/17/92

Drilling Equipment: NA Screened Length/Int: 42'-62' Total Depth: 65 ft.

Drilling Method: Hollow Stem Auger Casing Elev. 150.22 GW Depth: 51 ft.

Casing Size & Type: sch 40 PVC, 2" diam. Ref. Point.: Ground Surface Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
25.00		LAB	20, 31, 39	1.5/1.5		SAND, dk greenish gray, 5GY4/1, hydrocarbon odor, med to fine sand, poorly sorted, ang to subrnd, slight odor.	SW			10	592
30.00			13, 16, 22	1.5/1.5		CLAYEY SILT, dk greenish gray, 10 to 15% silt, minor sand, moist, non-plastic.	ML			10	107
35.00			10, 14, 16	1.5/1.5		SILTY CLAY, mod brn, 5YR4/4, moist, non-plastic.	CL			10	130
0.00			15, 19, 24	1.5/1.5		SILTY CLAY, as above, 10-15% silt.	CL			10	34
.00			9, 13, 17	1.2/1.5		SILTY CLAY, as above with minor sand.	CL			11	36
.00											

Camp Dresser & McKee Inc.

' nt: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: MW16

Drilling Contractor: Beylik Date Began: 3/17/92 Date Finished: 3/17/92

Drilling Equipment: NA Screened Length/Int: 42'-62' Total Depth: 65 ft.

Drilling Method: Hollow Stem Auger Casing Elev. 150.22 GW Depth: 51 ft.

Casing Size & Type: sch 40 PVC, 2" diam. Ref. Point: Ground Surface Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
50.00		LAB	11, 12, 15	1.5/ 1.5		SILTY CLAY, mod brn, wet, non-plastic, 10-15% silt, minor sand.	CL			8.3	28
						SAND, mod yel brn, 10YR5/4, coarse to fine sand, minor gravel, wet.	SW				
55.00				1.5/ 1.5		SILTY SAND, mod yel brn, med to fine sand, minor clay, 20% silt.	SM				
60.00						NO SAMPLE RECOVERED, heaving sands.					
65.00		LAB		1.2/ 1.5		SAND, mod yel brn, very coarse to fine sand, no silt, clay, saturated.	SW				
70.00											
75.00											

Camp Dresser & McKee Inc.

[illegible]nt: SCC | Site: Santa Fe Springs | Job Number: 2279-111-FI-FLD2 | Boring/Well No: UST-SB12

Drilling Contractor: Beylik | Date Began: 3/18/92 | Date Finished: 3/18/92

Drilling Equipment: NA | Screened Length/Int: NA | Total Depth: 35 ft.

Drilling Method: Hollow Stem Auger | Casing Elev. NA | GW Depth: NA

Casing Size & Type: NA | Ref. Point.: NA | Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00			10, 14, 26	1.5/ 1.5		SLUFF, sandy silt, foundry material, dusky yel brn, 5YR2/2.	ML			0.6	16
						SILTY CLAY, dk yel brn, 10YR4/2, slightly plastic, moist, minor sand.	CL				
10.00		LAB	17, 21, 24	1.5/ 1.5		CLAYEY SILT, dk yel brn, minor sand, 10% clay, moist.	ML			0.6	24.3
						SILTY CLAY, olive gray, 5Y4/1, minor sand, slightly plastic, moist, 40% silt.	CL				
15.00		LAB	22, 24, 30	1.2/ 1.5		SAND, olive gray, fine to med sand, poorly sorted, subang to subround, damp, no odor, minor silt.	SW			1.1	132
20.00		LAB	19, 27, 32	1.5/ 1.5		SAND, olv gray, med to very coarse sand, poorly sorted, subang to subrnd, slightly damp, odor, minor gravel last 0.5 ft, up to 1/2" in diam.	SW			1.0	59.8
25.00											

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: UST SB-12

Drilling Contractor: Beylik Date Began: 3/18/92 Date Finished: 3/18/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 35 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
25.00		LAB	27, 50	1.1/ 1.5		SAND, olv gray, med to very coarse sand, poorly sorted, subang to subrnd, slightly damp, odor, minor gravel last 0.5 ft.	SW			0.5	55.5
30.00		LAB	17, 23, 31	1.2/ 1.5		SANDY SILT, olv gray, damp, slight odor, hard, 10-20% fine sand.	ML			0.5	20
35.00		LAB	20, 25, 28	1.2/ 1.5		SANDY SILT, as above.	ML			1.0	9.2
40.00											
45.00											
50.00											

Camp Dresser & McKee Inc.

Client: SCC | Site: Santa Fe Springs | Job Number: 2279-111-FI-FL02 | Boring/Well No: UST-SB13

Drilling Contractor: Beylik | Date Began: 3/18/92 | Date Finished: 3/18/92

Drilling Equipment: NA | Screened Length/Int: NA | Total Depth: 25 ft.

Drilling Method: Hollow Stem Auger | Casing Elev. NA | GW Depth: NA

Casing Size & Type: | Ref. Point.: NA | Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	FID B	FID S	PID B	PID S
0.00											
5.00			7, 11, 14	1.0/1.5		SLUFF, possibly foundry material.	CL			0.0	4.7
						SILTY CLAY, dk yel brn, 10-15% silt, slightly plastic, moist.					
10.00		LAB	17, 29, 37	1.5/1.5		SILTY CLAY, mod olv brn, 5Y5/6, 20% silt, minor fine sand, hard, non-plastic.	CL			0.0	5.7
15.00		LAB	21, 33, 35	1.2/1.5		SILTY CLAY, same as above.	CL			0.0	13.8
						SAND, olv gray, 5Y4/1, minor silt, hydrocarbon odor, moist, med to fine sand, subang to subrnd, mod to poorly sorted.	SP				
20.00		LAB	15, 20, 25	1.0/1.5		SAND, olv gray, med to very coarse sand, poorly sorted, subang to subrnd, slightly damp, slight odor.	SW			0.0	26
25.00		LAB	17, 19, 28	1.5/1.5		SAND, same as above.	SW			0.0	7.0
						SILTY CLAY, olv gray, 20% silt, no odor, moist, minor fine sand, hard.	CL				
30.00											

VOLATILE ORGANIC VAPORS (ppm)

Camp Dresser & McKee Inc.

nt: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: UST-SB14

Drilling Contractor: Beylik Date Began: 3/19/92 Date Finished: 3/19/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 30 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: NA Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00			11, 14, 20	1.5/ 1.5		SLUFF, some asphalt. SILTY CLAY, dk yel brn, some black staining, slight hydrocarbon odor, 40% silt, minor sand, hard.	CL			0.0	106.4
10.00		LAB	16, 19, 24	1.5/ 1.5		SILTY CLAY, same as above.	CL			0.0	3082
						SANDY SILT, dusky brn, very moist, strong odor, oily appearance, minor clay, med to fine sand, poorly sorted, subang to subrnd, saturated with product.	ML				
15.00		LAB	15, 21, 35	1.2/ 1.5		SAND, olv gray, 5Y4/1, 5% gravel to 1" in diam, fine to coarse sand, very poorly sorted, ang to subrnd, hydrocarbon odor.	SW			0.0	1690
20.00		LAB	35, 50	0.8/ 1.5		SAND, same as above but less odor, <5% gravel up to 1/2" in diam.	SW			0.0	695

Camp Dresser & McKee Inc.

nt: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: UST-SB14

Drilling Contractor: Beylik Date Began: 3/19/92 Date Finished: 3/19/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 30 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
25.00		LAB	22, 26, 30	1.5/ 1.5		SAND, olive gray, 5Y4/1, 5% gravel up tp 1" in diam., fine to coarse sand, very poorly sorted, ang to subrnd, less TPH odor.	SW			0.0	20
						CLAYEY SILT, grayish olv green, 5GY3/2, minor fine sand, slight odor, 40% clay, dense.	ML				
30.00		LAB	19, 24, 33	1.5/ 1.5		SILTY CLAY, dk greenish gray, 5GY4/1, very dense, slightly moist, no odor, no sand.	CL			0.0	0.0
35.00											
40.00											
45.00											
50.00											

Camp Dresser & McKee Inc.

Client: SCC	Site: Santa Fe Springs	Job Number: 2279-111-FI-FLD2	Boring/Well No: UST-SB15
Drilling Contractor: Beylik		Date Began: 3/19/92	Date Finished: 3/19/92
Drilling Equipment: NA		Screened Length/Int: NA	Total Depth: 35 ft.
Drilling Method: Hollow Stem Auger		Casing Elev. NA	GW Depth: NA
Casing Size & Type:		Ref. Point.: NA	Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00		LAB	12, 15, 11	1.2/1.5		SILTY CLAY, dk yel brn, some dk staining, odor, 10% silt, very hard.	CL			0.0	696
10.00		LAB	17, 18, 21	1.5/1.5		SILTY SAND, dusky brn, wet with product, strong odor, oily appearance, fine to coarse sand, poorly sorted, subang to subrnd.	SM			0.0	2910
15.00		LAB	18, 25, 39	1.2/1.5		SAND, olv gray, 5Y4/1, 5% gravel up to 1/2" in diam, less oily, odor, subang to subrnd, coarse to fine sand, poorly sorted.	SW			0.0	2632
20.00		LAB	16, 19, 23	1.2/1.5		SAND, same as above but less odor, <5% gravel up to 1/2" in diam, minor clay.	SW			8.0	2460
25.00											

Camp Dresser & McKee Inc.

:nt: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: UST-SB15

Drilling Contractor: Beylik Date Began: 3/19/92 Date Finished: 3/19/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 35 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref Point. NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
25.00		LAB	20, 26, 32	1.2/1.5		CLAYEY SILT, grayish olv green, minor sand, slight odor, brown staining, 30% clay, dense, moist.	ML			0.5	106.
30.00		LAB	19, 20, 27	1.2/1.5		SILTY CLAY, dk greenish gray, very dense, slightly moist, very slight odor, no sand.	CL			0.5	14 7
35.00		LAB	15, 21, 23	1.5/1.5		SILTY CLAY, same as above, no odor	CL			0.0	0
40.00											
45.00											
50.00											

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: UST SB-16

Drilling Contractor: Beylik Date Began: 4/14/92 Date Finished: 4/14/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 35 Ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00		LAB	13, 21, 23	1.5/1.5		SILTY CLAY, mod brn, 5YR4/4, minor fine grain sand, no odor, dense, wet at top.	CL			0.0	1.5
10.00		LAB	16, 19, 26	1.5/1.5		SAND, olive gray, 5Y3/2, very coarse to medium grained, TPH odor, oily, minor gravel.	SW			0.0	1.2
15.00		LAB	17, 24, 32	1.5/1.5		SAND, olive gray, fine to medium grained, TPH odor, oily, no gravel.	SW			0.0	373
20.00		LAB	20, 25, 37	1.5/1.5		SAND, olive gray, fine to coarse grained, TPH odor, oily.	SW			0.0	400
25.00		LAB	19, 21, 29	1.5/1.5		SILTY CLAY, olive gray, approx. 20% silt, slight odor, no sand.	CL			0.0	42
30.00											

Camp Dresser & McKee Inc.

Client: SCC   Site: Santa Fe Springs   Job Number: 2279-111-FI-FLD2   Boring/Well No: UST SB-16

illing Contractor: Beylik   Date Began: 4/14/92   Date Finished: 4/14/92

Drilling Equipment: NA   Screened Length/Int: NA   Total Depth: 35 ft.

Drilling Method: Hollow Stem Auger   Casing Elev. NA   GW Depth: NA

Casing Size & Type: Ref. Point. NA   Logged By. E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
30.00		LAB	13, 15, 18	1.2/ 1.5		SILTY CLAY, olive gray, approx. 20% silt, slight odor, no sand.	CL			0.0	1.4
35.00		LAB	10, 12, 20	1.4/ 1.5		SILTY CLAY, as above.	CL			0.0	1.2
40.00											
45.00											
50.00											
55.00											
60.00											

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FL02 Boring/Well No: UST SB-17

Drilling Contractor: Beylik Date Began: 4/14/92 Date Finished: 4/14/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 35 Ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00		LAB	9, 14, 15	1.5/ 1.5		SILTY CLAY, dusky yellow brown, approx. 40% silt, slight odor, dense.	CL			0.0	3.4
10.00		LAB	7, 11, 13	1.5/ 1.5		SILTY CLAY, as above but olive gray.	CL			0.0	1.7
						SAND, olive gray, oily odor and appearance, subang to subround, medium to coarse grained sand.	SW				
15.00		LAB	11, 13, 15	1.5/ 1.5		SAND, as above with minor gravel.	SW			0.0	1642
20.00		LAB	9, 15, 17	1.5/ 1.5		SAND, as above but wet with hydrocarbon product.	SW			0.0	768
25.00		LAB	16, 18, 21	1.2/ 1.5		CLAYEY SILT, olive gray, minor fine grained sand, slight odor, not oily.	ML			0.0	63.1
30.00											

Camp Dresser & McKee Inc.

Client: SCC   Site: Santa Fe Springs   Job Number: 2279-111-FI-FL02   Boring/Well No: UST SB-17

Drilling Contractor: Beylik   Date Began: 4/14/92   Date Finished: 4/14/92

Drilling Equipment: NA   Screened Length/Int: NA   Total Depth: 35 ft.

Drilling Method: Hollow Stem Auger   Casing Elev. NA   GW Depth: NA

Casing Size & Type: Ref. Point.: NA   Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
30.00		LAB	14, 20, 24	1.3/1.5		SILTY CLAY, olive gray, approx. 40% silt, slight odor, irregular shaped material up to 1 inch at 30 to 30.7 BGS.	CL			0.0	0.0
35.00		LAB	18, 19, 23	1.4/1.5		SILTY CLAY, as above.	CL			0.0	2.3
40.00											
45.00											
50.00											
55.00											
60.00											

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: UST SB-18

Drilling Contractor: Beylik Date Began: 4/14/92 Date Finished: 4/14/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 35 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00		LAB	17, 20, 22	1.3/1.5		SILTY CLAY, dusky yellow brown, top 1/2' wet, minor gravel, approx. 20% silt, dense.	CL			0.0	136
10.00		LAB	15, 22, 25	1.4/1.5		SAND, olive gray, minor silt, very oily, strong odor, some black staining.	SW			0.0	619
15.00		LAB	19, 20, 21	1.3/1.5		SAND, olive gray, very coarse to medium grained, oily odor and appearance, minor gravel.	SW			0.0	250
20.00		LAB	16, 23, 28	1.2/1.5		SANDY SILT, olive gray, oily fine grained sand, 20% sand, dense.	ML			0.0	211
						SAND, same as 15 feet in depth.	SP				
25.00		LAB	13, 15, 19	0.8/1.5		SILTY CLAY, olive gray, approx. 20% silt, TPH odor, staining, no sand.	CL			0.0	780
30.00											

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: UST SB-18

Drilling Contractor: Beylik Date Began: 4/14/92 Date Finished: 4/14/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 35 Ft

Drilling Method: Hollow Stem Auger Casing Elev: NA GW Depth: NA

Casing Size & Type: Ref Point: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	FID B	FID S	PID B	PID S
30.00		LAB	14, 20, 24	1.5/ 1.5		CLAYEY SILT, olive gray, approx. 40% clay, minor fine grain sand, TPH odor, no staining	ML			0.0	7.8
35.00		LAB	16, 18, 21	1.5/ 1.5		SILTY CLAY, olive gray, approx. 20% silt, slight odor, no sand	CL			0.0	0.0
40.00											
45.00											
50.00											
55.00											
60.00											

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: WMU12-B1

Drilling Contractor: Beylik Date Began: 3/19/92 Date Finished: 3/19/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 40 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00		LAB	7, 9, 10	0.7/ 1.5		SILTY CLAY, dusky to dk yel brn, soft, slight earthy odor, dense, moist, pH=9.	CL			0.0	131
5.00		LAB	10, 12, 21	1.2/ 1.5		SILTY CLAY, mod brn, 5YR4/4, slight odor, dense hard, pH=7.	CL			0.0	4.3
10.00		LAB	12, 16, 19	1.4/ 1.5		SILTY CLAY, same as above but with some black staining(not oily), pH=6.	CL			0.0	7.1
15.00		LAB	14, 15, 17	1.2/ 1.5		CLAYEY SILT, dk greenish gray, 5GY4/1, oily odor and appearance, minor sand, pH=4.5.	ML			0.0	24.3
20.00		LAB	5, 10, 20	0.8/ 1.5		SAND, olv gray, 5Y4/1, dry to moist, oily odor, minor gravel, coarse to fine sand, subang to subrnd, poorly sorted, pH=6.	SW			0.0	12.1
25.00											

Camp Dresser & McKee Inc.

C nt: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: WMU12-B1

Drilling Contractor: Beylik Date Began: 3/19/92 Date Finished: 3/19/92

Drilling Equipment NA Screened Length/Int: NA Total Depth: 40 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref Point. NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
25.00											
30.00		LAB	11, 13, 17	1.5/ 1.5		SANDY SILT, lt olv brn, 5Y5/6, moist, no odor, v fine sand, dense, pH=6.	ML			0.0	2.6
35.00			15, 20, 23	1.5/ 1.5		SILTY CLAY, mod yel brn, 10YR5/4, moist, no odor.	CL				
40.00		LAB	13, 16, 24	1.5/ 1.5		SILTY CLAY, same as above, pH=6.	CL			0.0	0
45.00											
50.00											

Camp Dresser & McKee Inc.

nt: SCC	Site: Santa Fe Springs	Job Number: 2279-111-FI-FLD2	Boring/Well No: WMU12-SB2
Drilling Contractor: Beylik		Date Began: 3/20/92	Date Finished: 3/23/92
Drilling Equipment: NA		Screened Length/Int: NA	Total Depth: 40 ft.
Drilling Method: Hollow Stem Auger		Casing Elev. NA	GW Depth: NA
Casing Size & Type:		Ref. Point.: NA	Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
		LAB	10, 14, 16	1.2/ 1.5		SILTY CLAY, grayish green, soft, dense, moist, pH=6.	CL			2.0	8.4
5.00		LAB	7, 12, 18	1.5/ 1.5		SILTY CLAY, dusk to dk yel brn, soft, dense, moist, pH=6.	CL			2.1	14.4
						SILTY CLAY, mod brn, 5YR4/4, slight odor, dense, hard, pH=7.					
10.00		LAB	10, 12, 13	1.5/ 1.5		SILTY CLAY, same as above, pH=7.	CL			2.0	19.7
15.00		LAB	--	1.5/ 1.5		SILTY SAND, dk yel brn, slightly oily, coarse to fine sand, 40% silt, pH=6.	SM			0.5	2.0
20.00		LAB	14, 20, 50	1.2/ 1.5		SAND, olv gray, 5Y4/1, dry to moist, oily odor, minor gravel, coarse to fine sand, subang to subrnd, poorly sorted, pH=6.	SW			1.4	9.0
25.00											

Camp Dresser & McKee Inc.

nt: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FL02 Boring/Well No: WMU12-SB2

Drilling Contractor: Beylik Date Began: 3/20/92 Date Finished: 3/23/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 40 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type Ref Point NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
25.00											
30.00		LAB	--	1.2/ 1.5		SANDY SILT, lt olv brn, 5Y5/6, moist, no odor, very fine sand, dense, pH = 6.	ML			1.4	37
35.00											
40.00		LAB	16, 25, 35	1.3/ 1.5		SILTY CLAY, mod yel brn, 10YR5/4, moist, no odor, pH=6	CL			0.0	36.3
45.00											
50.00											

Camp Dresser & McKee Inc.

Page 1 of 1

Client: SCC | Site: Santa Fe Springs | Job Number: 2279-111-FI-FLD2 | Boring/Well No: WMU46-SB1

Drilling Contractor: Beylik | Date Began: 3/20/92 | Date Finished: 3/20/92

Drilling Equipment: NA | Screened Length/Int: NA | Total Depth: 25 ft.

Drilling Method: Hollow Stem Auger | Casing Elev. NA | GW Depth: NA

Casing Size & Type: | Ref. Point.: NA | Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00											
10.00		LAB	--	1.2/1.5		CLAYEY SILT, lt olv brn, moist. soft.	ML			1.3	2.9
						SILTY SAND, lt olv brn, 5Y5/6, fine sand, 40% silt, slight odor.	SM				
15.00		LAB	--	1.2/1.5		SAND, olv gray, dry, no odor, coarse to fine sand, subang to subrnd, poorly sorted, 5% gravel up to 1/2" in diam.	SW			1.3	6.0
20.00		LAB	17, 22, 35	1.2/1.5		SAND, olv gray, dry, med to fine sand, no gravel.	SW			2.5	225
25.00		LAB	24, 26, 27	--		SANDY SILT, olv gray, moist, no odor, very fine sand.	ML			2.0	9.5
30.00											

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: WMU46-SB2

Drilling Contractor: Beylik Date Began: 4/14/92 Date Finished: 4/14/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 40 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	FID B	FID S	PID B	PID S
0.00											
		LAB	3, 9, 14	1.3/1.5		SILTY CLAY, dk yel brn, minor gravel, slight odor, 10% silt.	CL			0.0	3.8
5.00											
		LAB	9, 14, 17	1.5/1.5		SILTY CLAY, same as above, odor.	CL			0.0	216
10.00		LAB	5, 11, 20	1.5/1.5		SILTY CLAY, as above, but 5% silt.	CL			0.0	1110
						SAND, black, tarry, saturated with product, very oily, fine to coarse grained.	SW				
15.00		LAB	10, 15, 19	1.2/1.5		SAND, olive gray, as above but somewhat oily, no black staining.	SW			0.0	832
20.00		LAB	12, 18, 24	1.3/1.5		SAND, olive gray, as above.	SW			0.0	618
25.00		LAB	16, 22, 29	1.5/1.5		SAND, as above.	SW			0.0	908
30.00											

VOLATILE ORGANIC VAPORS (ppm)

Camp Dresser & McKee Inc.

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: WMU46-SB2

Drilling Contractor: Beylik Date Began: 4/14/92 Date Finished: 4/14/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 40 ft.

Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
30.00		LAB	18, 23, 27	1.5/ 1.5		SAND, olive gray, somewhat oily, minor gravel, fine to coarse grained, no black staining.	SW			0.0	868 (SAND)
						SILTY CLAY, olive gray, approx. 20% silt, slight odor, no staining.	CL				645 (CLAY)
35.00		LAB	20, 31, 37	1.1/ 1.5		SILTY CLAY, as above.	CL			0.0	648
40.00		LAB	25, 30, 35	1.2/ 1.5		SILTY CLAY, as above.	CL			0.0	417
45.00											
50.00											
55.00											
60.00											

Camp Dresser & McKee Inc.

Page 1 of 1

Client: SCC Site: Santa Fe Springs Job Number: 2279-111-FI-FLD2 Boring/Well No: WMU46-SB3

Drilling Contractor: Beylik Date Began: 3/19/92 Date Finished: 3/19/92

Drilling Equipment: NA Screened Length/Int: NA Total Depth: 15 ft.

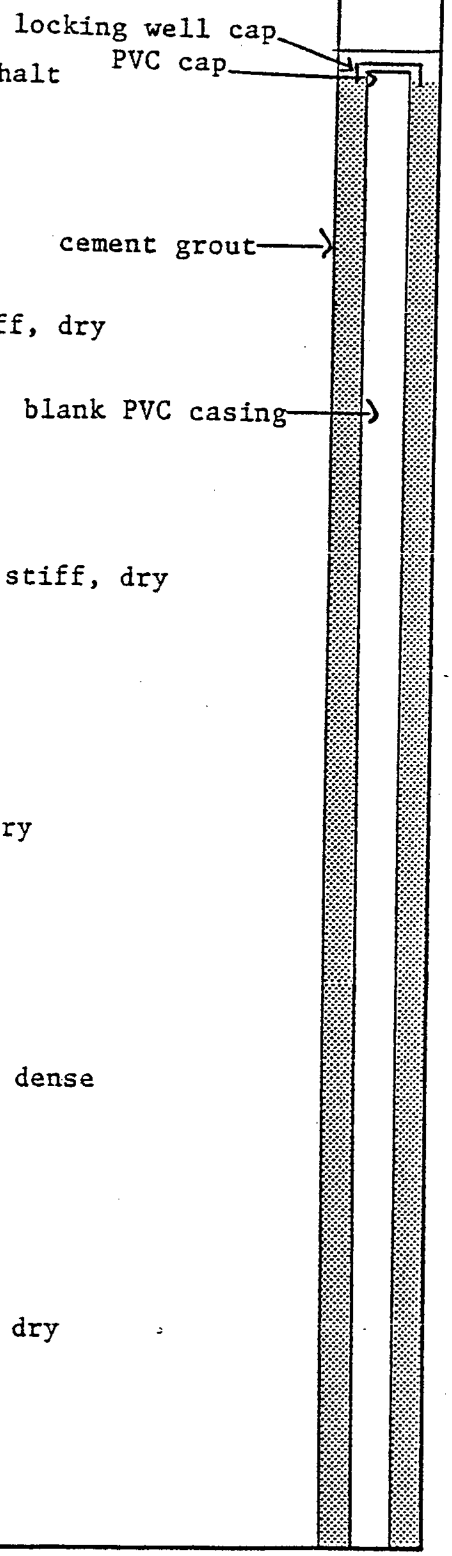
Drilling Method: Hollow Stem Auger Casing Elev. NA GW Depth: NA

Casing Size & Type: Ref. Point.: NA Logged By: E. Weyand

DEPTH (FT)	SAMPLE TYPE	SAMPLE	BLOWS	REC (FT)	GRAPHIC	DESCRIPTION	USCS	VOLATILE ORGANIC VAPORS (ppm) FID B	FID S	PID B	PID S
0.00											
5.00											
10.00		LAB	8, 11, 13	1.2/ 1.5		SILTY CLAY, dk yel brn, slight TPH odor, hard, moist, dense.	CL			0.0	2152
		LAB	10, 12, 16	1.1/ 1.5		SAND, dk yel brn, oily TPH odor, 5% gravel to 1/4 in in diam., coarse to med sand, subang to subrnd, poorly sorted.	SW			0.0	2107
15.00											
20.00											
25.00											

DEPTH (feet)	Blow Count	Sample	USCS	Description
0			GC	gravely clay, black, 4" asphalt dry
5	32	1	ML	clay, brown-black, very stiff, dry
10	27	2	ML	silty clay, red-brown, very stiff, dry
15	39	3	SC	clayey sand, brown, dense, dry
20	68	4	SP	sand, med.,fine, white, very dense dry
25	70	5	SP	sand, fine-med., very dense, dry
30				

Well Const.



J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-1

PLATE 5

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:

PROJECT NO. Q-1014-1

DEPTH (feet)	Blow Count	Sample	USCS	Description
30	68	6	SP	silty sand, very fine, brown, dense, dry
35				
40				
45				measure water level 43.61'
50	59	7	ML	clay, red-brown, hard, dry
55				
60				

Well Const.

cement grout

blank PVC casing

Bentonite

caved material

sand pack

slotted PVC casing

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So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-1

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:

PROJECT NO. Q-1014-1

PLATE
5

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
60	37	8	SW	sand, fine to coarse, med.,wet sand pack slotted PVC casing	
65					
70				Fill	
75					
80				Boring terminated at 80ft.(El.72.3') Date of drilling was 1-7-85 Elevation of well head 152.26' Materials logged by J. Friedman	

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Santa Fe Springs, Ca.

PLATE 5

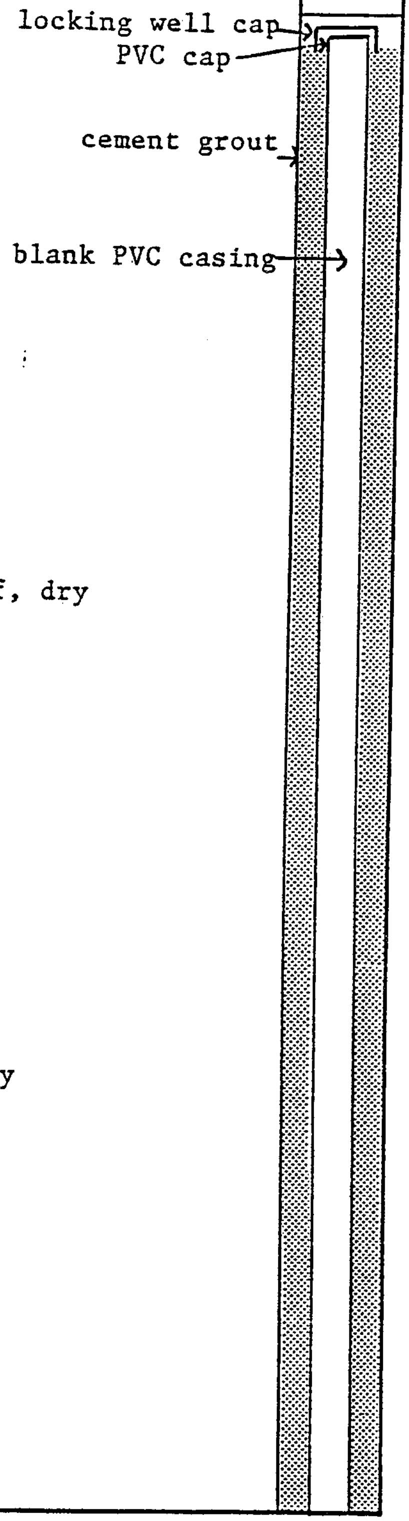
LOG of BORING MW-1

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:

PROJECT NO. Q-1014-1

DEPTH (feet)	Blow Count	Sample	USCS	Description
0			PT	Organic silty clay, black 4" asphalt at surface
5	41			clay on outside of sampler
10	32	I	ML	clayey silt, brown, very stiff, dry
15			ML	clayey silt end here
	63	2	SP	sand, fine to med., dense, dry
20	72	3	SM	silty sand, brown v. dense, dry
25	70	4	SM	silty sand, brown, dense, dry
			27.5	
30				

Well Const.



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PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:

So. Calif. Chemical
Santa Fe Springs

LOG of BORING MW-2

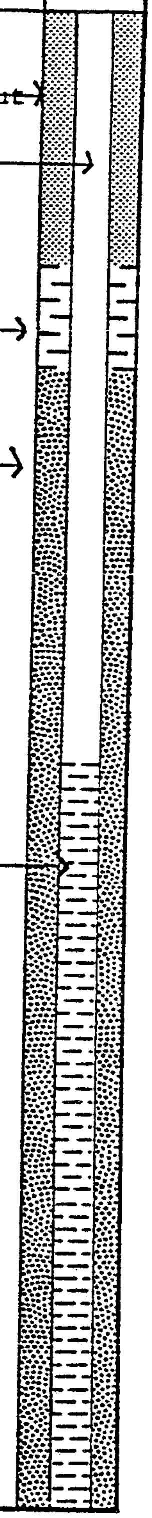
PROJECT NO. Q-1014-1

PLATE 6

Depth (feet)	Blow Count	Sample	USCS	Description
30			SM	end of sm
	48	5 3'	CL	clay, brown, hard, dry
35				
40	25	6	CL	clay, brown, very stiff, dry
45				
50	44	7	ML SC	sandy clay brown, hard, moist clayey sand, med. to fine brown moist
55				
60				

DEPTH (feet)

Well Const.



cement grout

blank PVC casing

Bentonite

sand pack

slotted PVC casing

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:

So. Cal. Chemical
Santa Fe Springs, Ca.

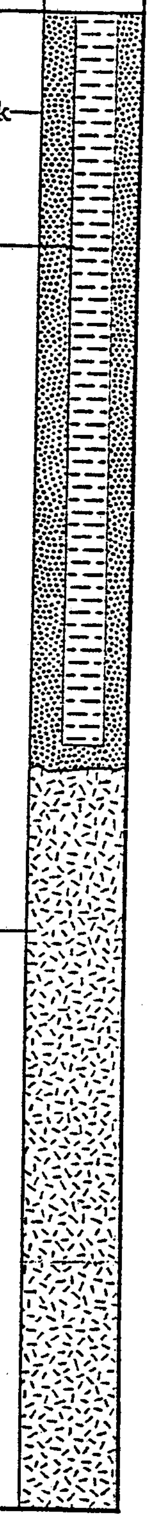
LOG of BORING MW-2

PROJECT NO. 0-1014-1

PLATE 6

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
60	57	8	SP	sand fine, gray, dense, wet	
65					
70					
75					
80					
85					
90					

DEPTH (feet)



J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING	So. Cal. Chemical Santa Fe Springs, Ca. LOG of BORING MW-2	PLATE 6
PREPARED BY: JF DATE: 5/85		
CHECKED BY: DATE:	PROJECT NO. Q-1041-1	

Blow Count	Sample	USCS	Description	Well Const.

DEPTH (feet)

90

95

100

caved material

Boring Terminated at 95 ft.(EL. 56')
Date of Drilling was 1-10-85
Elevation of well head 151.56'
Materials logged by Jeff Friedman

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-2

PLATE 6

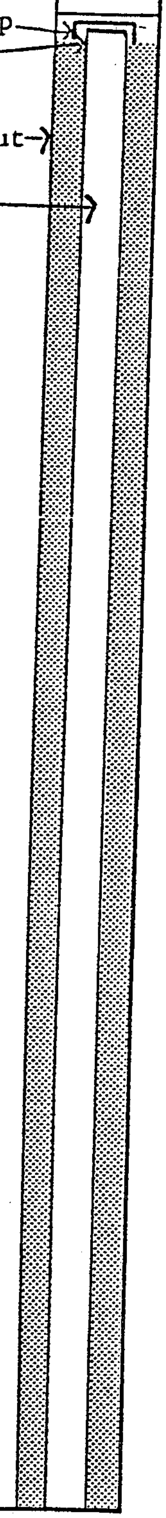
PREPARED BY: 5/85 DATE:

CHECKED BY: DATE:

PROJECT NO. Q-1014-1

DEPTH (feet)	Blow Count	Sample	USCS	Description
0				concrete cut slab
5	77	1	CL	clay, red, hard, dry
10	58	2	SM	clayey silt, brown, hard, dry
15	69	3	SW	sand, med., brown, v.dense, dry
20	64	4	SM	silty sand, fine, brown, dense, dry
25				
30				

Well Const.



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PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:

So. Calif. Chemical
Santa Fe Springs

LOG of BORING MW-3

PROJECT NO. Q-1014-1

PLATE 7

Depth (feet)	Blow Count	Sample	USCS	Description
30	62/6	6	SW 3.1'	sand, med., coarse, gray, white v.dense, dry
35				
40	64	7	CL 40.5	clay, brown, hard, dry
45				
50	40	8	ML	clayey silt, some v.fine sand brown, dense, dry
55				bottom of clay
60				

DEPTH (feet)

Well Const.

concrete grout

blank PVC casing

Bentonite

sand pack

slotted PVC casing

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Santa Fe Springs

LOG of BORING MW-3

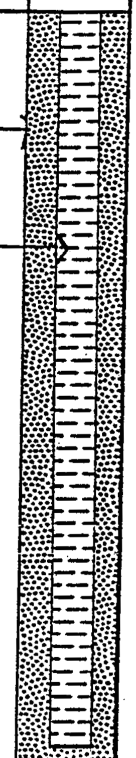
PLATE 7

PREPARED BY: JF DATE: 5/85

CHECKED BY: DATE:

PROJECT NO. 0-1014-1

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
60	52/6	10	SM	silty sand, v.fine, brown, very dense wet	
65					
70					
75	50/6	10	SW	sand, fine-med., brown V. dense, wet	



Boring terminated at 75 ft.(El.76.6')
Date of drilling was 1-16-85
Elevation of well head 151.62'
Materials logged by J. Friedman

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical
Santa Fe Springs

LOG of BORING MW-3

PLATE 7

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:
PROJECT NO. Q-1014-1

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0			SC	clayey sand, black lft.	locking well cap, PVC cap
					cement grout
5					blank PVC casing
	38	1	CL	clay, red, v.stiff, dry	
10	27	2	ML	silty clay, red, v.stiff, dry	
15	40	3	SM	silty sand, white, dense, dry	
20	64	4	SM	silty sand, fine, white, v. dense, dry	
25	65/6	5	SM	silty sand, med.,fine, brown, v.dense dry	
30					

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So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-4

PLATE 8

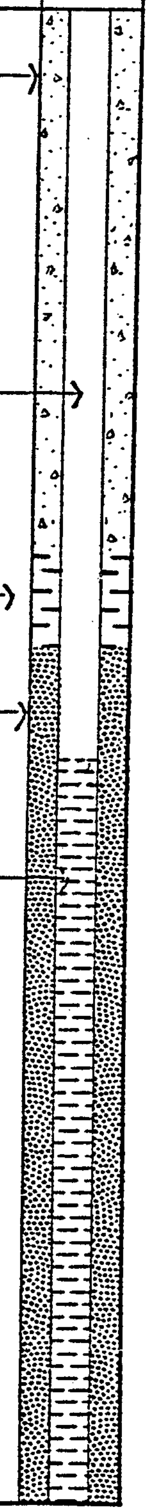
PREPARED BY:	JF	DATE:	5/85
CHECKED BY:		DATE:	

PROJECT NO. Q-1014-1

Depth (feet)	Blow Count	Sample	USCS	Description
35	50	6	ML CL	silty clay clay, brown, hard, dry
45	44	7	CL	silty clay, brown, hard, dry

DEPTH (feet): 30, 35, 40, 45, 50, 55, 60

Well Const.



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So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-4

PLATE 8

PREPARED BY: JF DATE: 5/85

CHECKED BY: DATE:

PROJECT NO. Q-1014-1

Blow Count	Sample	USCS	Description	Well Const.
88/5	8	SM	silty sand, fine, brown, v.dense, wet	
			sand pack	
			slotted PVC casing	

DEPTH (feet): 60, 65, 70, 75

Boring terminated at 75 ft (El.75')
Date of drilling 1-16-85
Elevation of well head 149.76'
Materials logged by J.Friedman

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So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-4

PLATE 8

PREPARED BY: JF DATE: 5/85

CHECKED BY: DATE:

PROJECT NO. Q-1014-1

Depth (feet)	Blow Count	Sample	USCS	Description
0				
5	10	5	ML	Silt with fine sand, brown, stiff, moist
10	23	10	ML/SP	Sandy silt/silty sand, brown, dense, moist
15	41	15	SP	Sand: medium - coarse sand, brown, very dense, dry
20	66	20	SP	Sand, coarse to medium sand, light brown, very dense, dry-damp
25	98+	25	SP	Medium-coarse sand, light brown-tan, very dense, dry-moist
30				

Well Const.

6" Concrete

Lock well cap

PVC cap

Blank PVC casing

Concrete grout

J.H. KLEINFELDER & ASSOCIATES
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Southern California Chemical

LOG of BORING MW-4A

PLATE 9

PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. Q-1014-2

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
35	80	35	ML/CL	Clayey silt/silty clay, dark brown, very stiff-hard, very moist	
40					
45	80	45			
50				Blank PVC casing →	
55				Concrete grout →	
60					
65					

DEPTH (feet)

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PREPARED BY: DATE:
CHECKED BY: DATE:

Southern California Chamical

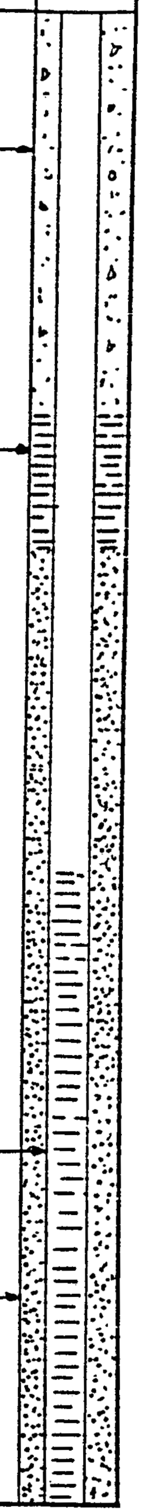
LOG of BORING MW-4A

PROJECT NO. Q-1014-2

PLATE 9

Depth (feet)	Blow Count	Sample	USCS	Description
70				
75				
80	53+	80	SP	Sand, fine, brown, dense, wet
85				
	98	88	SP	Sand, fine-medium, gray, very dense, wet
90				
95				
100				

Well Const.



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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

Southern California Chemical

LOG of BORING MW-4A

PLATE 9

PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. Q-1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
100	82	100	ML	Silt & very fine sand, brown, very dense, wet	
				Slotted PVC casing	
105		105	ML	Silt, occasional clast 72cm, brown, dense, damp	
				Sand pack	
110	75	110		Silty sand, brown, very dense, wet	
	75		SM/SP	Sand, fine-medium, very dense, wet	

Boring terminated at 110'.
Date of drilling 7-10-85.
Materials logged by Ken Durand.

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: DATE:
CHECKED BY: DATE:

Southern California Chemical

LOG of BORING MW-4A

PROJECT NO. Q-1014-2

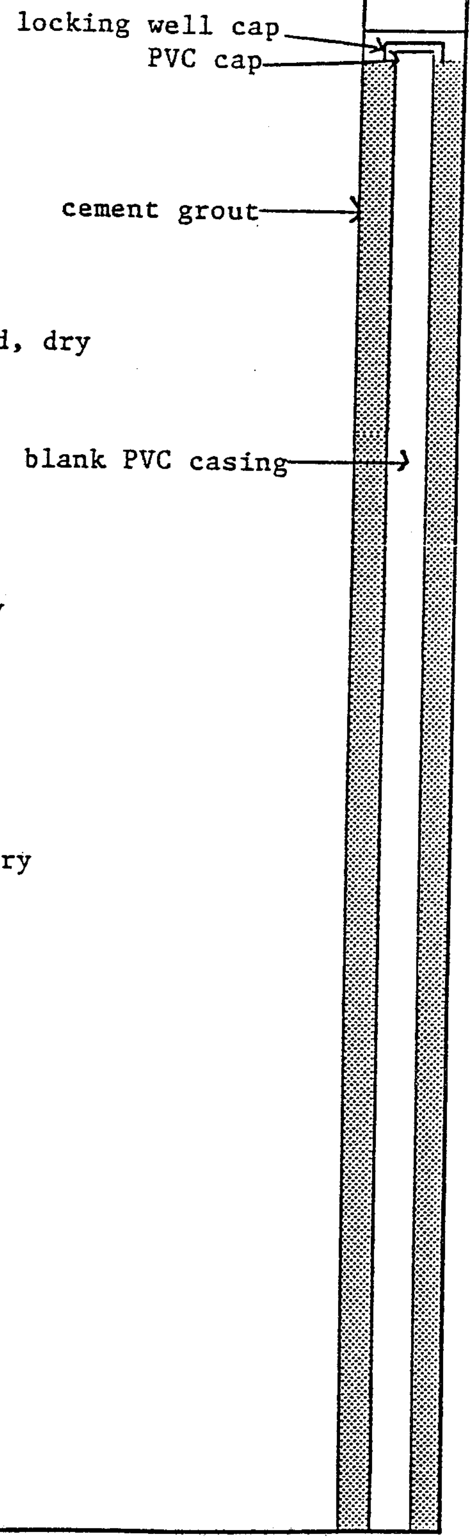
PLATE 9.

LOG of BORING MW-5

DEPTH (feet): 0, 5, 10, 15, 20, 25, 30

Blow Count	Sample	USCS	Description
		CL	sandy clay, red, dry
33	1	SC	clayey sand, fine, red-med, dry
24	2	SP	sand, fine, gray, med.-dry
46	3	SP	sand, fine, gray, dense, dry
	4	SW	sandy,gray, v.dense, dry
27	5	CL	clay, green, v. stiff, dry

Well Const.



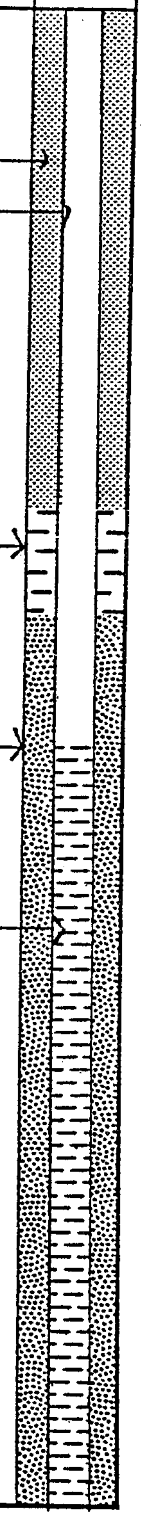
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: JF	DATE: 5/85	So. Calif. Chemical Santa Fe Springs	PLATE 10
CHECKED BY:	DATE:	LOG of BORING MW-5 PROJECT NO. 1014-1	

DEPTH (feet)

Depth (feet)	Blow Count	Sample	USCS	Description
30	72	6	CL	End of clay
			SM	silty sand, v.fine, gray, dry
35				
40				
			GM	silty gravel, brown, damp
45				
	88	7	SW	gravely sand, med.-coarse, gray very dense, wet
50				
55				
60				

Well Const.



J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING	So. Calif. Chemical Santa Fe Springs LOG of BORING MW-5	PLATE 10
PREPARED BY: JF DATE: 5/85		
CHECKED BY: DATE:	PROJECT NO. Q-1014-1	

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
60				sand pack	
65			SW	sand, med to coarse, grain up to ¼"	
				slotted PVC casing	
70					
75				Boring terminated at 75 ft.(El.78') Date of drilling was 1-13-85 Elevation of well head 153.21 Materials logged by J. Friedman	

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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical
Santa Fe Springs

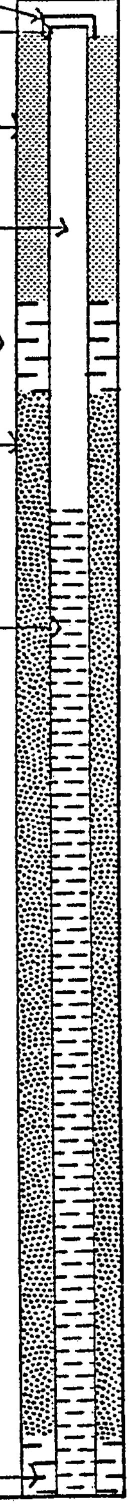
LOG of BORING MW-5

PLATE 10

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:
PROJECT NO. Q-1014-1

Depth (feet)	Blow Count	Sample	USCS	Description
0			ML	clay, black, wet
				whitish zone 6" thick
				top of green zone
5				base of green zone
	89	1	ML	clay, green, hard, dry
				end of clay
10	61	2	SW	sand, coarse-med, black, dense, dry
				wet zone 6" thick
15	92	3	SW	sand, coarse-med., gray, v. dense dry
20	89	4	SW	sand, coarse-med., gray, v. dense, dry
25	80	5	SP	sand and silt, brown, wet
			ML	clay, green, hard, dry
30				

Well Const.



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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:

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Santa Fe Springs, Ca.

LOG of BORING MW-6A

PROJECT NO. Q-1014-1

PLATE 11

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30	78	6	CL	clay, green, hard, dry	
35					
40	85	7	CL	clay, brown-red, hard, dry	caved materials
45				Boring terminated at 45 ft. (El.104') Date of drilling was 1-22-85 Elevation of well head 149.31' Materials logged by J. Friedman	
50					
55					
60					

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So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-6A

PLATE 11

PREPARED BY: JF DATE: 5/85

CHECKED BY: DATE:

PROJECT NO. 0-1014-1

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0			ML	clay, black	locking well cap PVC cap
					cement grout
5			ML	clay, green, hard dry	blank PVC casing
10			SW	sand, coarse-med.,black, dense, dry	
15			SW	sand, coarse-med., gray,v.dense, dry	
20			SW	sand, coarse-med., gray, v.dense, dry	
25			SP ML	sand and silt, brown, wet clay, green, hard, dry	
30					

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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. CAlif. Chemical
Santa Fe Springs

PLATE 12

LOG of BORING MW-6B

PREPARED BY: JF DATE: May 85

CHECKED BY: DATE:

PROJECT NO. Q-1014-1

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30			CL	clay, green, hard, dry	
				cement grout	
				blank PVC casing	
35					
40			CL	clay, brown-red, hard, dry	
				Bentonite	
45			CL	clay, red, dry	
				sand pack	
				slotted PVC casing	
50					
55					
60					

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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical
Santa Fe Springs

LOG of BORING MW-6B

PLATE 12

PREPARED BY: JF DATE: 5/85
CHECKED BY: DATE:
PROJECT NO. 0-1014-1

Blow Count	Sample	USCS	Description	Well Const.
52/6	1	SW	sand, med.-fine, white, v. dense wet	

DEPTH (feet)

60

65

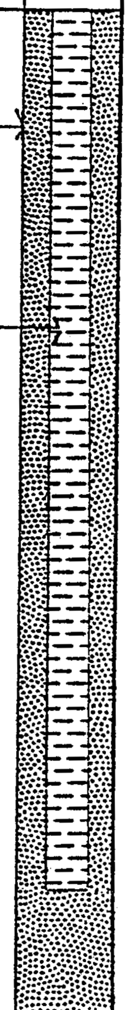
70

75

80

sand pack

slotted PVC casing



Boring terminated at 80 feet
(El± 69.5 ft)
Date of drilling was 1-22-85
elevation of well head 149.46ft
materials logged by J. Friedman

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical
Santa Fe Springs

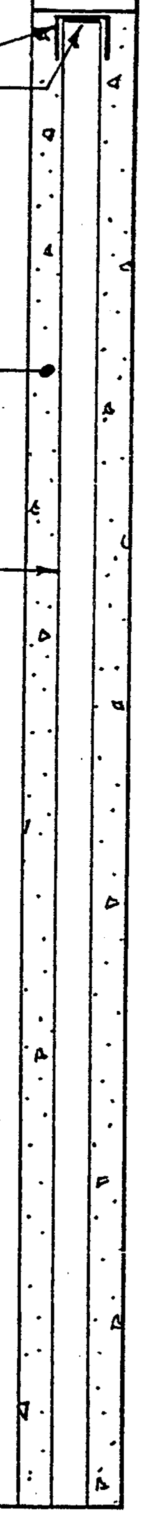
LOG of BORING MW-6B

PLATE 12

PREPARED BY: JF	DATE: 5/85		
CHECKED BY:	DATE:	PROJECT NO 0-1014-1	

DEPTH (feet)	Blow Count	Sample	USCS	Description
0				Pebbles
5	16	5	ML	Sandy silt, silt with fine sand, Lt. brown, med. damp
10	40	10		
15	25	15	SP	Sand, med. to fine sand, tan, loose, damp
20	62	20	SP	Sand, med., Lt. tan, dense, damp
25	67	25	SP	Sand, med. to fine, Lt. brown-tan, very dense, damp
30				

Well Const.



J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: DATE:
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So. Cal. Chemical

SANTA FE SPRINGS, CALIFORNIA

LOG of BORING MW-7

PROJECT NO. Q1014-2

PLATE 13

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30					
35	29	35	ML	Clayey silt: clayey silt with small amount fine sand. Brown, very stiff, moist	
40				Bentonite	
45	25	45	CL	Silty dry: Reddish-brown, stiff, moist	
				Area of caving	
50				0.020" machine slotted PVC well casing	
55					
60					

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SANTA FE SPRINGS, CALIFORNIA
LOG of BORING MW-7

PLATE 13

PREPARED BY: DATE:
CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
60			SP	Sand, fine	
65					
70			SP	Sand, fine-med.	
				#3 sand filter pack	
75		75	SW	Sand, fine, white, wet	

BORING TERMINATED AT 75'
DATE OF DRILLING: JULY 8, 1985
DRILLING DONE BY: JEFF FRIEDMAN

J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING	So. Cal. Chemical SANTA FE SPRINGS, CALIFORNIA LOG of BORING MW-7	PLATE 13
PREPARED BY: DATE:		
CHECKED BY: DATE:	PROJECT NO. Q1014-2	

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	
				Lock well cap	
				PVC cap	
5	15	5	ML	Silt: Silt with fine sand, black medium stiff, moist	
				Cement grout	
				Blank PVC casing	
10	42	10	ML	Silt: silt with fine sand, black-dk. brown, stiff to moist.	
15	38	15	SP	Sand: fine sand, dk. grey, dense moist	
20	94	20	SP	Sand: fine to med. sand grey, hard, moist	
25	90/5	25	SW	Sand: coarse sand/gravilly sand, grey-white, v. dense, damp	
30					

DEPTH (feet)

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So. Cal. Chemical
SANTA FE SPRINGS, CALIF.

LOG of BORING MW-8

PLATE 14

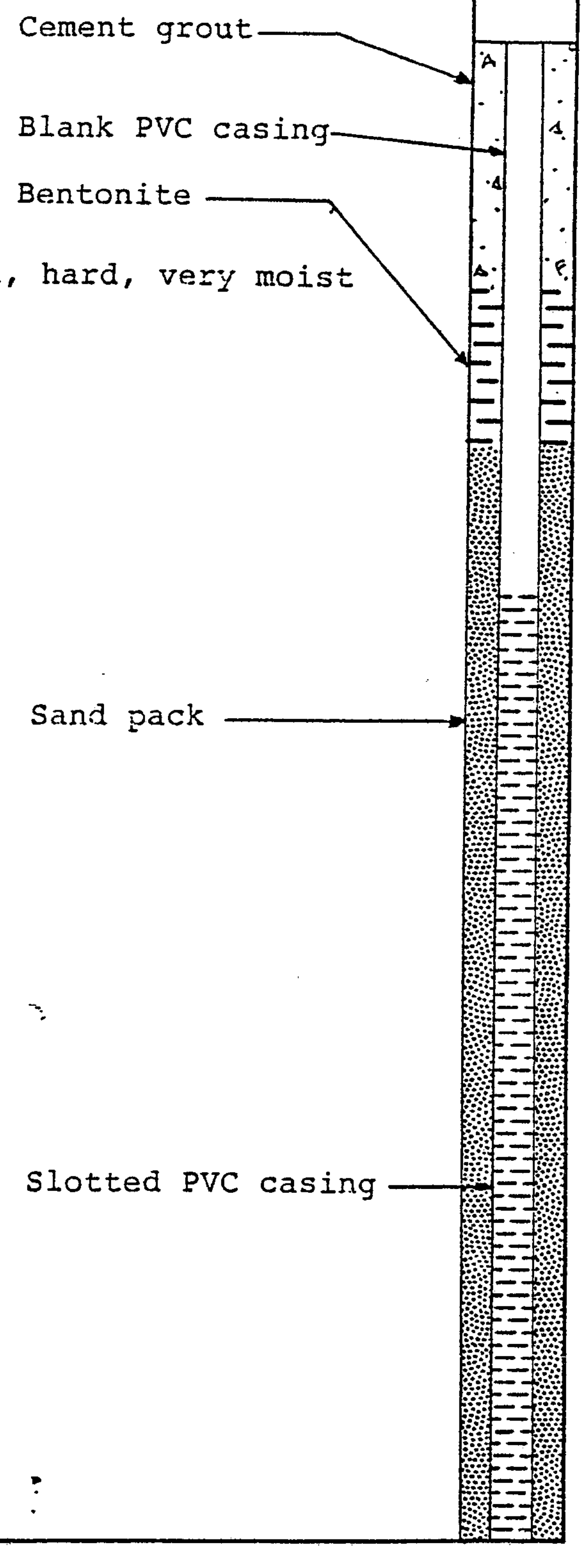
PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. 01014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description
30				
35	53	35	CL	Clay: lt. brown, hard, very moist
40				
45	97/ 5	45		No recovery
50				
55				
60				

Well Const.



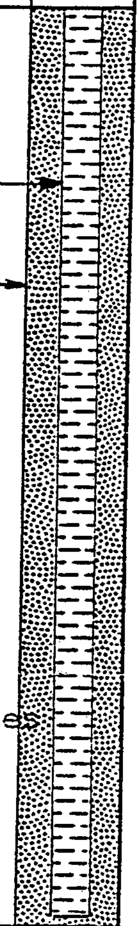
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: DATE:
CHECKED BY: DATE:

So. Chemical Co.
SANTA FE SPRINGS, CALIFORNIA
LOG of BORING MW-8

PROJECT NO. Q1014-2

PLATE
14

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
60					
				Slotted PVC casing	
				Sand pack	
65					
70					
				Sand: fine to med., with coarse pebbles dense, tan, lt. brown	
75		75	SP	Bottom of hole	

BORING TERMINATED AT 75'
DATE OF DRILLING: JULY 12, 1985
DRILLING DONE BY: JEFF FRIEDMAN

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: DATE:
CHECKED BY: DATE:

So. Chemical Co.
SANTA FE SPRINGS, CALIFORNIA

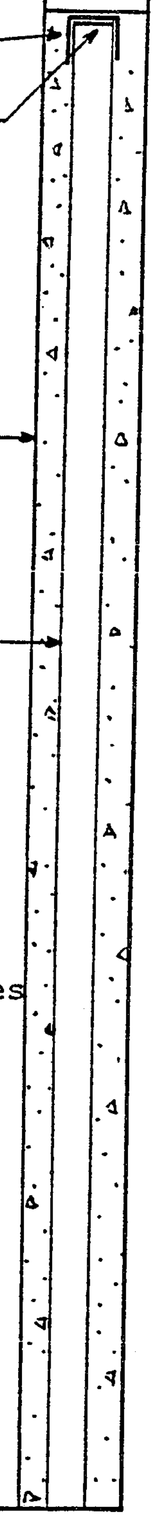
LOG of BORING MW-8

PROJECT NO. Q1014-2

PLATE 14

Depth (feet)	Blow Count	Sample	USCS	Description
0				6" concrete
				Locking well cap
				PVC cap
5	10	5	ML	Silt, silt with fine sand, black, soft, very moist
				Cement grout
10	30	10		No recovery
				Blank PVC casing
15	39	15	SP	Sand: fine sand with interbedded silt lens, tan-reddish, med. dense, moist
20	68	20	SW	Sand: med. to coarse sand with pebbles up to ½", tan, very dense, damp
25	99/4	25	SW	Sand: coarse sand with ground, grey pebbles up to 1". V. dense, moist
30				

Well Const.



J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: DATE:
CHECKED BY: DATE:

So. Cal. Chemical Co.
SANTA FE SPRINGS, CALIFORNIA

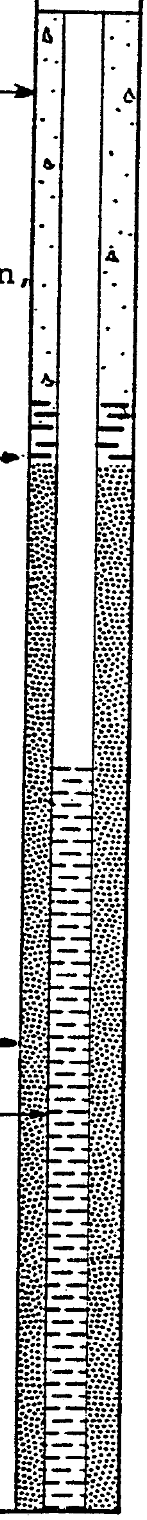
LOG of BORING MW-9

PROJECT NO. Q1014-2

PLATE 15

DEPTH (feet)	Blow Count	Sample	USCS	Description
30				
35	82	35	Ml	Sandy silt: silt with fine sand, brown, very stiff, dry-med.
40				
45	84	45	ML	No recovery
50				
55				
60				

Well Const.



Cement grout

Bentonite

Sand pack

Slotted PVC casing

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: DATE:

CHECKED BY: DATE:

So. Cal. Chemical Co.
SANTA FE SPRINGS, CALIFORNIA

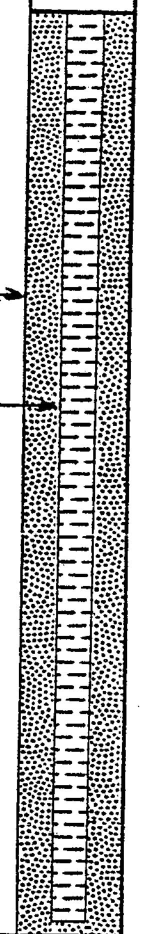
LOG of BORING MW-9

PROJECT NO. Q1014-2

PLATE 15

DEPTH (feet): 60, 65, 70, 75

Blow Count	Sample	USCS	Description	Well Const.
100/2		SM	Silty sand, med. - CRS, brown, V. dense, wet	



Sand pack

Slotted PVC CASING

BORING TERMINATED AT 77'
DATE OF DRILLING: JULY 10, 1985
DRILLING DONE BY: JEFF FRIEDMAN

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Cal. Chemical Co.

SANTA FE SPRINGS, CALIFORNIA

LOG of BORING MW-9

PLATE 15

PREPARED BY: DATE:
CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	locking well cap; PVC cap
					cement grout
5	14	7	ML	Sandy silt, black, med. dry	
					blank PVC casing
10	28	4	ML	Clayey silt, brown, med.stiff damp	
15	44	15	SP	Sand, med. to fine sand, brown, very dense, dry	
20	45	20	SP	Sand, fine to med. dense, dry	
25	90	25	SP	Sand, med. to fine, tan-hard, damp	
30					

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:

So. Cal. Chemical

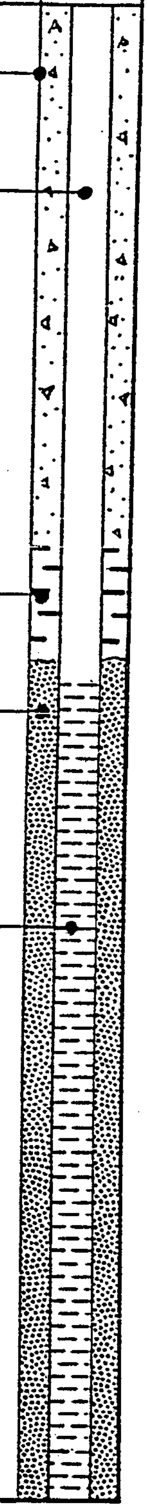
LOG of BORING MW-10

PROJECT NO. Q1014-2

PLATE 16

DEPTH (feet)	Blow Count	Sample	USCS	Description
30				
35	64	35		No recovery
40				
45	66	45	CL	Clay, lt.brown, reddish stain, very moist
50			CL	Clay
55				
60				

Well Const.



J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Cal. Chemical

LOG of BORING MW-10

PLATE 16

PREPARED BY:	GH	DATE:	7-85
CHECKED BY:		DATE:	

PROJECT NO. Q1014-2

Blow Count	Sample	USCS	Description	Well Const.
		SP	Sand, fine	sand pack; slotted PVC casing
			Boring terminated at 75' Date of drilling was 4-10-85 Materials logged by K. Durand	

DEPTH (feet): 60, 65, 70, 75, 80, 85

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Cal. Chemical

LOG of BORING MW-10

PLATE 16

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

Depth (feet)	Blow Count	Sample	USCS	Description
0				6" Concrete
5	28	5	SC	Clayey sand, med. to fine with clay dark brown, dense, dry
10	14	10	SM	Silty sand, med.to fine, with silt brown, loose, damp
15	26	15	SP	Sand, fine, med., lt.brown, loose dry
20	29	20	SP	Sand, coarse to med. tan-white med.dense, damp
25	91	25	SP	Sand, med. to coarse sand with pebbles up to 3/8 " tan, very dense, damp
30				

Well Const.

DEPTH (feet)

J.H. KLEINFELDER & ASSOCIATES

GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: GH DATE: 7-85

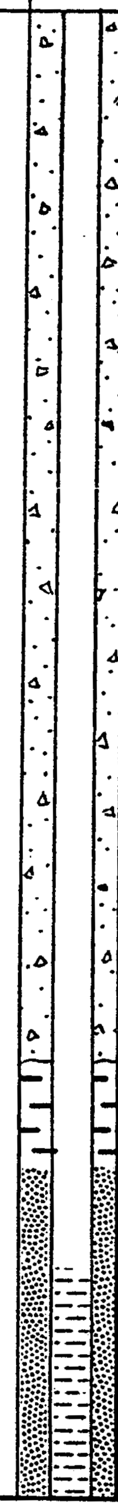
CHECKED BY: DATE:

LOG of BORING MW-11

PROJECT NO.

PLATE

17

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30					
35	64	35	ML	Sandy silt, silt with fine sand dark brown, very stiff, moist	
40					
45	49	45	ML CL	Silty clay, clayey silt, dense, very stiff, moist	
50					
55	41	55	CL	Clay, brown, saturated	
60					

H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

LOG of BORING MW-11

PLATE 17

PREPARED BY: DATE:
CHECKED BY: DATE: PROJECT NO.

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
60					
65					
70					
75	90	75	SP	Sand interbeded fine & med. sand, tan-grey, very dense, saturated	
80				Boring Terminated at 76.5 feet Date of drilling was7-8-85 Materials logged by J. Friedman	

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

LOG of BORING MW-11

PLATE 17

PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:
PROJECT NO. 0:033-1

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				4" concrete	
			SM	Silty sand, black, moist slant at 30	
5	9	5	ML	Silt, silt with fine sand, black medium, moist	
10	75	10	ML	Sandy silt, silt with fine sand brown, black-reddish, very stiff very moist	
15	52	15	SP	Sand, med. to fine sand brown, dense, damp	
20	20	99 +	SW	Sand, med to coarse, very little fines, tan, very dense, damp	
25					
30					

DEPTH (feet)

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical

LOG of BORING B-1

PLATE 18

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
30	80	30	SP	Sand med. to coarse sand tan, very dense, damp , only 3" sample	
40	78		ML	sandy silt, silt with fine sand drk.brn, very stiff, moist	
50	82	50	CL	Clay,very stiff, brown-green, wet	

Boring terminated at 50 feet
Date of drilling was 7-9-85
Material logged by K. Durand

DEPTH (feet): 30, 35, 40, 45, 50, 55, 60

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical

LOG of BORING B-1

PLATE 18

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	
				Slant at 28°	
			SP	Sand, fine sand black, moist	
5	39	5	ML/ CL	Silt/clay brown, very stiff, dry	
10	78	10	CL	clay, brown clay very stiff - hard, damp	
15	15	64	SP	Sand, med.sand, lt brown-tan very dense dry	
20	20	22	Sp	Sand, med. sand tan-red med. dense, dry	
25	25	76		no recovery	
30					

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Cal. Chemical

LOG of BORING B-2

PLATE 19

PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	
			SM	Silty sand, fine sand & silt with pebbles up to 3/4", damp	
5	20	5	SM	Silty sand, fine sand and silt, med.dense damp, drk.brown	
10	41	10	SM	Silty sand, fine sand and silt dense, moist drk.brown	
15	52	15	SP	Sand, med. sand, tan,very dense,moist	
20					
				Boring terminated at 15'. Date of drilling was 7/8/85. Materials logged by K. Durand.	
25					
30					

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Calif. Chemical

LOG of BORING B-3

PLATE 20

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0			SP	6" concrete Sand, med. sand with pebbles up to 3/8" brown, dry	
5	33	5	ML	Silt with fine sand yellow stain, very stiff, dry	
10	54	10	ML	Silt with fine sand, yellow-brown, very stiff, dry-damp	
15	71+	15	ML	Silt with fine sand, brown, very stiff, damp	
20	100+	20	SP	Sand, med. to coarse sand with ½" rounded pebbles drk.brown-reddish very dense, damp	
25	97	25	SP	Sand coarse to med.sand tan-grey, very dense damp	
30					

J.H. KLEINFELDER & ASSOCIATES
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PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:

So. Cal. Chemical

LOG of BORING B-4

PROJECT NO. Q1014-2

PLATE 21

Depth	Blow Count	Sample	USCS	Description	Well Const.
30	88	30	ML SP	Silt & Sand, brown very dense, damp	

Boring terminated at 30 feet
Date of drilling was 7-9-85
Materials logged by K. Durand

DEPTH (feet)

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Cal. Chemical

LOG of BORING B-4

PLATE 21

PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:
PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	
5	14	5	ML	Sandy silt: silt with fine sand, dark brown, med. stiff, moist	
10	20	10	ML	Sand silt, silt with fine sand and clay, brown-reddish, stiff, dry	
15	31	15	ML	Silt with clay, brown-reddish, stiff, damp	
20	91/4	20	SP	Med. to fine sand, grey-brown, very dense damp	
25	73	25	SW	gravelly sand, sand with pebbles up to 1½" dia. grey, hard, damp	
30					

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:

So. Cal. Chemical

LOG of BORING B-5

PROJECT NO. Q1014-2

PLATE 22

Blow Count	Sample	USCS	Description	Well Const.
91/5	30	SW	Sand- med. to coarse sand, grey very dense, moist/wet	

30

DEPTH (feet)

Boring Terminated at 30 feet
Date of drilling was 7-12-85
Materials logged by K. Durand

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: GH DATE: 7-85

So. Cal. Chemical

LOG of BORING B-5

PLATE
22

Depth (feet)	Blow Count	Sample	USCS	Description	Well Const.
0					
5	14	5	ML CL	Silt/clay, yellow, soft, moist	
10	40	10		No recovery	
15	41	15	SP	Sand, fine sand with silt, brown reddish, very dense, dry	
20	70	20	SP	Sand, med. to coarse sand red-brown very dense moist, very little fine	
25	93+	25	GP SW	Sandy gravel, gravely sand, rounded pebbles up to ½", very dense, damp	
30					

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:

So. Cal. Chemical

LOG of BORING B-6

PROJECT NO. Q1014-2

PLATE 23

Blow Count	Sample	USCS	Description	Well Const.
57		ML	Sandy silt, silt with coarse sand very stiff moist, wet	

30

DEPTH (feet)

Boring terminated at 30 feet
Date of drilling was 7-9-85
Materials logged by K. Durand

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Cal. Chemical

LOG of BORING B-6

PLATE 23

PREPARED BY: GH DATE: 7-85
CHECKED BY: DATE:
PROJECT NO. 01014-2

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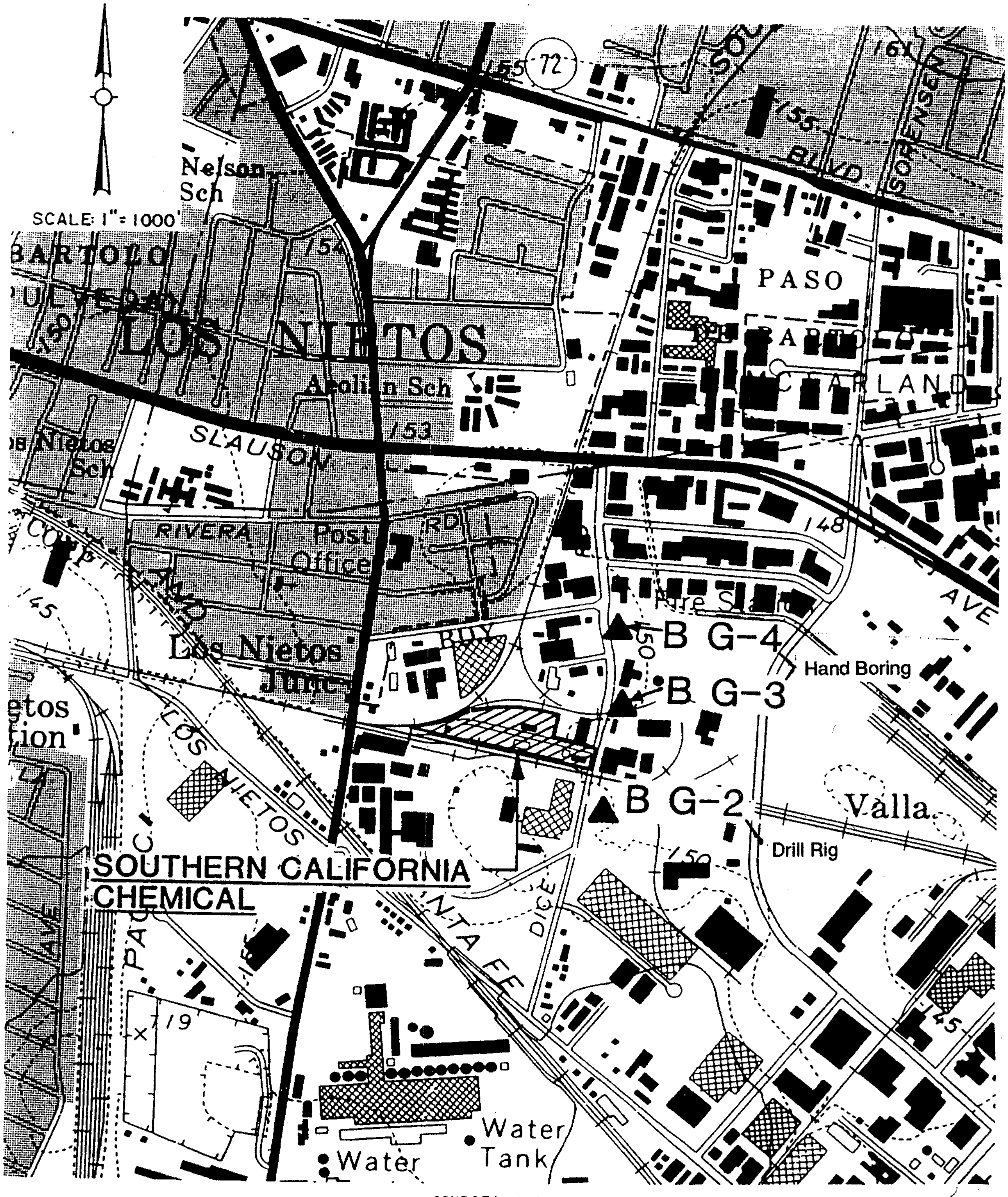


SOURCE: 1981 USGS MAP, WHITTIER QUADRANGLE CALIFORNIA 7.5 MINUTE SERIES (TOPOGRAPHIC).

LEGEND

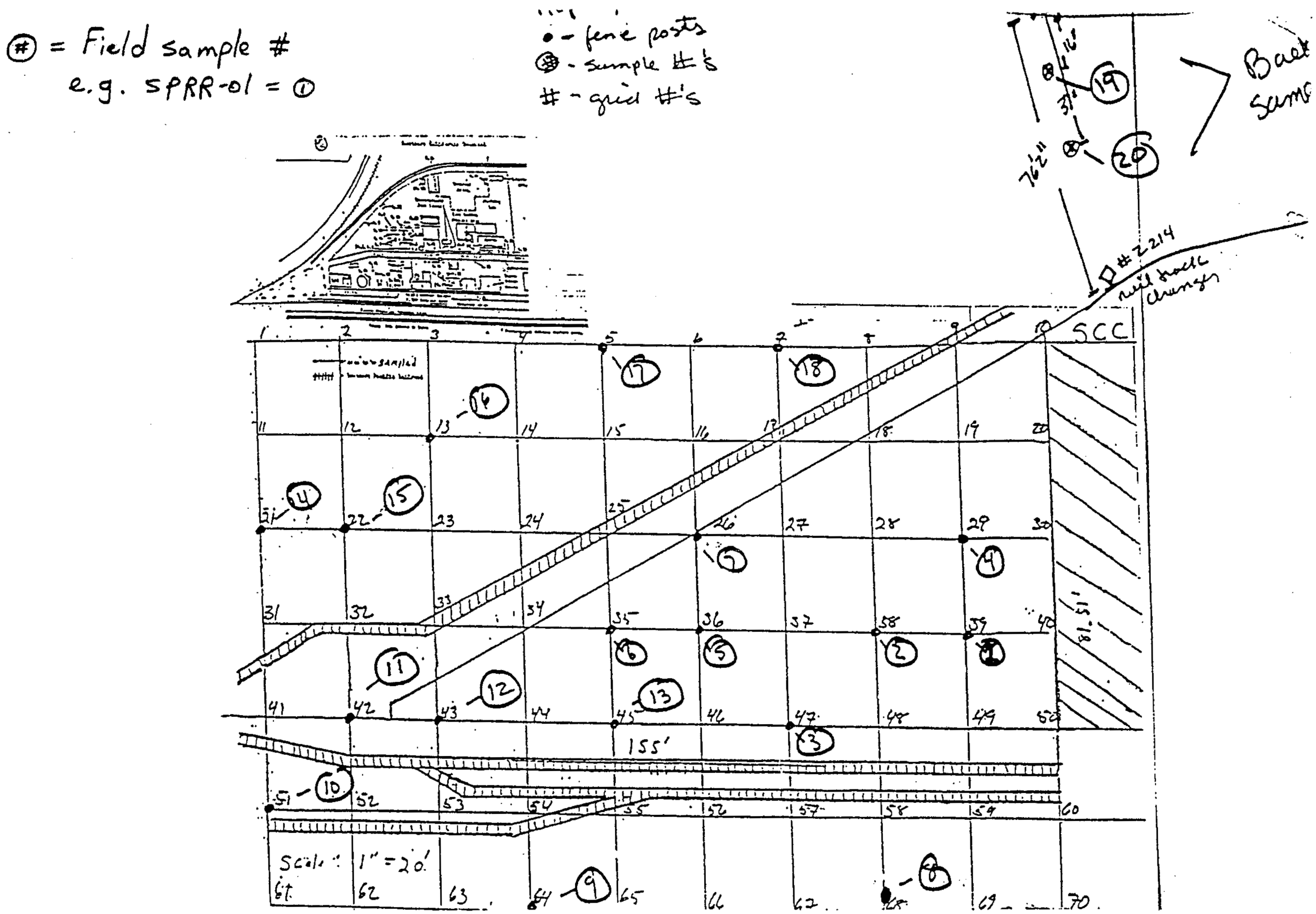
▲	VERTICAL BORING LOCATION
B G-2	BORING NUMBER
150	20 FOOT CONTOUR INTERVAL
145	5 FOOT CONTOUR INTERVAL
	HEAVY-DUTY ROAD
	LIGHT-DUTY ROAD
	UNIMPROVED DIRT ROAD
(72)	STATE ROUTE

SOUTHERN CALIFORNIA CHEMICAL

OFF-SITE BACKGROUND SOIL BORING LOCATIONS

CAMP DRESSER & McKEE INC.
Irvine, California
environmental engineers, scientists, planners, & management consultants
CDM

Figure 3-2



SOUTHERN CALIFORNIA CHEMICAL

DHS OFF-SITE METALS and PCB SAMPLE LOCATIONS WEST of SCC

Camp Dresser & McKee

CDM

Figure 4-1

SOURCE: Modified from DHS Field Notes Indicating Sample Locations.

TABLE 4-1
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Surface Soil Sampling
Calculated Average Values & Background Metals Concentration in Soil
(mg/kg)

Comment or Reference	Arsenic	Cadmium	Chromium (Hexavalent)	Chromium (Total)	Copper	Iron	Mercury	Nickel	Lead	Zinc	pH
Calculated On-site Average	NA	ND	0.73	23.7	30.7	14,250	NA	19.5	8.4	47.8	8.0
Calculated Off-site Average	NA	ND	1.75	20.4	22.1	18,000	NA	14.8	9.4	24	7.8
Calculated Combined Average	NA	ND	1.5	21.2	24.1	17,100	NA	15.9	9.1	29.9	7.7
Referenced Metals Concentration in Soil											
U.S. GEOLOGICAL SURVEY (__)											
Western U.S. Range	<0.1 - 97	<1 - 10		3 - 2000	2 - 300		<0.01 - 4.6	<5 - 700	10 - 700	0 - 2100	NA
Western U.S. Meam	7	1		56	27		0.065	19	20	65	NA
SOIL CHEMISTRY (__)											
Average in Lithosphere		0.2		100	70		40	100	10	80	NA
Soil Content		0.01 - 7		5 - 3000	2 - 100		0.005 - 0.1	0 - 1000	2 - 200	10 - 300	NA
Natural and Apparently Safe Typical Value	5	0.06		2	20		0.05	40	10	50	NA
Natural and Apparently Safe Range	1 - 50	0.01 - 7		5 - 1000	2 - 100		0.02 - 0.2	0 - 1000	2 - 200	10 - 300	NA

File Name: backor wk1
REVISED 3-10-92

NOTE: Calculated Average Values Do Not Include Anomalous Results

ND = Not Deteccted   NA = Not Analyzed

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Surface Soil, Active Sumps, and Surface Water Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
DD01	1-2	1.1	ND	43.0	135	30,900	33.0	17.6	97.0	8.7
DD02	1-2	1.2	ND	302	7,200	13,900	519	112	355	5.9
DD03	1-2	0.50	ND	40.7	226	23,200	83.8	17.8	214	4.5
DD04	1-2	ND	ND	20.4	40.5	13,700	18.2	24.0	77.6	NA
DD05	1-2	ND	ND	366	1,400	22,400	186	167	371	5.2
DD06	1-2	0.82	ND	1,480	2,600	51,700	260	379	748	NA
DHS-HB01	0-1.5	3.6	ND	2,630	231	28,100	72.6	732	271	5.7
DHS-HB02	0-2	15.0	53.7	8,070	1,970	34,700	101	949	4,150	7.6
DHS-HB03	0-2	21.8	30.5	1,380	6,570	33,200	363	19,100	14,000	6.9
LAB-HB01	0.5-1	0.83	0.62	105	556	15,700	30.4	88.7	982	8.1
	1-2	ND	ND	36.4	39.6	31,800	29.4	ND	64.0	9.2
	3-4	ND	ND	32.4	37.4	25,300	24.9	ND	55.1	9.5
	5-6	ND	ND	28.0	32.4	23,200	22.3	ND	48.6	9.2
PL-HB01	0.5-1	ND	ND	42.7	170	14,400	28.2	30.0	103	9.7
	3-4	ND	ND	34.0	36.1	30,700	23.1	8.4	60.5	6.7
	5-6	ND	ND	32.9	34.3	29,900	22.9	8.1	60.0	6.9
PL-HB02	1-2	ND	ND	23.9	31.8	21,100	19.2	ND	49.2	6.1
	3-4	ND	ND	34.4	37.9	30,700	27.6	ND	67.1	8.2
	5-6	ND	ND	38.3	42.4	32,300	30.7	ND	68.8	8.8
PL-HB03	2.5-3	ND	ND	33.0	29.6	28,300	21.4	6.91	51.6	8.4
	4.5-5	ND	ND	50.1	50.0	36,000	35.4	9.1	74.2	8.8
	6-6.5	ND	ND	38	43.1	29,400	31.5	8.6	65.8	8.7
PL-HB04	1-2	ND	ND	23.0	96.7	21,000	32.2	48.5	94.2	6.5
	3-4	ND	ND	21.8	75.0	18,600	45.7	9.0	114	5.4
	5-6	ND	ND	36	109	29,800	102	ND	234	5.4
RR01	1-2	1.3	216	3,840	1,170	40,200	85.1	240	331	4.7
RR02	1-2	0.82	9.0	550	808	17,000	713	39.6	410	4.9

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.

ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Surface Soil, Active Sumps, and Surface Water Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
RR03	1-2	1.1	10.3	243	1,260	18,500	470	36.1	297	6.3
RR04	1-2	ND	ND	86.1	540	18,100	108	44.2	134	4.5
RR05	1-2	ND	ND	21.1	42.3	16,700	19.2	7.1	55.2	8.0
RR06	1-2	1.4	ND	22.4	123	17,000	79.7	8.1	101	6.4
UST-HB02	approx. 20	0.10	ND	4.9	52	7,100	5.7	4.2	26	NA
UST-HB03	approx. 20	NA	NA	NA	NA	NA	NA	NA	NA	8.4
UST-HB05	approx. 20	NA	NA	NA	NA	NA	NA	NA	NA	8.6
WMU09	1-2	1.8	96.6	2,960	1,250	18,400	39.9	1,380	442	7.7
WMU18/19	1-2	1.9	ND	828	6,070	44,000	1,070	1,000	869	4.5
	3-4	ND	ND	353	9,660	29,400	425	317	369	4.5
	5-6	ND	ND	26.7	2,160	35,000	260	45.7	259	3.2
WMU20A	1-2	4.7	ND	1,190	770	16,200	98.2	113	316	7.6
WMU20B	1-2	4.4	1.4	244	426	12,800	218	541	267	7.4
WMU22	1-2	1.5	ND	502	498	24,400	35.6	180	137	4.6
WMU23A	1-2	3.5	ND	194	8,340	15,100	151	105	187	8.7
WMU23B	1-2	1.2	ND	1,010	358	15,600	88.1	1,810	687	9.4
WMU24	1-2	2.6	ND	117	235	13,200	15.8	827	1,630	7.5
WMU25	0-2	ND	ND	1,040	5,760	23,300	1,220	189	389	6.2
WMU31	1-2	4.6	ND	29.6	161	17,800	37.2	22.3	313	7.1
	3-4	1.8	ND	42.8	599	15,300	61.1	8.5	936	7.1
WMU32	1-2	2.8	ND	428	1,740	9,320	170	61.2	2,300	7.4
	3-4	1.4	ND	92	1,330	17,200	74.2	15.3	818	7.3
WMU33B	0	1.7	ND	96.8	368	8,430	29.8	61.7	391	9.2
	1.5-2.5	7.2	ND	21	1,770	17,400	38.6	10.4	1,120	5.6
WMU35B	2-3	ND	ND	40.7	454	18,500	254	11.4	126	5.2
	6-7	ND	ND	35.2	96.3	29,900	41.0	ND	64.6	7.9
WMU36A	1.5-2.5	11.7	13.0	3,020	4,690	15,600	2,410	258	2,720	9.8

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.
ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Surface Soil, Active Sumps, and Surface Water Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	4-5	ND	ND	46.6	59.3	19,600	36.1	10.3	88.4	7.1
WMU42	1.5-2.5	0.64	ND	31.1	68.3	17,100	16.2	130	158	8.0
	4-5	ND	ND	37.4	61.6	29,500	30.7	38.5	188	7.4
WMU46A	0-2	ND	ND	185	1,340	23,900	506	172	262	7.9
	2-4	ND	ND	19.6	1,970	17,800	1,560	93.0	389	5.2
	4-6	ND	ND	32.7	49.4	26,200	429	ND	111	6.4
WMU46B	1-2	ND	0.98	9,570	23,100	31,200	6,230	1,370	2,170	7.5
	2-4	ND	ND	18.8	1,530	16,100	472	25.2	238	5.0
	4-6	ND	1.27	7,530	13,300	28,800	11,800	2,180	2,920	6.9
WMU46C	1-2	3.1	6.5	937	3,780	17,100	520	465	928	12
	3-4	1.9	ND	118	7,060	15,600	102	42.8	255	7.6
	5-6	1.4	ND	64.3	2,780	20,200	269	32.3	920	7.0
WMU46D	1-1.8	ND	6.0	1,410	5,970	29,500	380	18,300	14,600	6.9
	3	ND	ND	15.6	56.9	11,200	14.0	46.8	80	7.5
	5	ND	ND	22.0	866	20,500	226	9.0	161	6.1
WMU46E	1.5	15.6	9.7	778	4,270	26,750	284	6,320	12,200	6.9
	3	19.2	23.9	1,970	5,680	45,700	362	16,900	14,400	6.9
	5	4.0	23.9	988	4,250	22,200	362	1,590	2,540	7.3
ACTIVE SUMP SLUDGE SAMPLES										
WMU33A	0	ND	ND	627	29,400	38,600	133	1,660	672	7.0
WMU34	0	ND	ND	210	90,500	24,800	ND	1,260	2,720	6.9
WMU35A	5	ND	35.1	748	88,500	47,600	564	615	559	5.2
WMU36B	2.5	ND	ND	1,000	93,400	69,900	629	38,700	1,520	8.6

Shaded Box Indicates Value Is Greater Than One Order of Magnitude Above Background.

ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Surface Soil, Active Sumps, and Surface Water Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
SURFACE WATER (UNITS = mg/L)										
SW1		ND	ND	ND	0.034	ND	ND	ND	0.63	8.0
SW2		ND	ND	ND	0.81	ND	0.30	ND	0.62	6.8
SW3		0.0057	ND	ND	0.61	ND	0.41	ND	0.72	6.9
SW4		ND	ND	ND	0.23	ND	ND	ND	0.22	6.8

FILE NAME: NSOLMET.WK1

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.

ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
BG02	2-2.5	ND	0.96	33.2	28.7	28,100	22.4	7.2	61.1	8.1
	5-5.5	ND	1.2	32.3	31.3	27,300	24.4	6.1	59.5	8.2
	10-10.5	ND	3.1	8.4	9.3	11,900	6.7	ND	27.6	7.0
	15-15.5	ND	ND	6.8	8.3	8,490	5.4	ND	20.2	7.3
	20-20.5	ND	ND	9.9	9.4	10,900	7.6	ND	33.8	7.0
	30-30.5	ND	60.5	32.3	36.8	29,400	27.4	9.5	73.5	7.7
	40-40.5	ND	ND	35.2	32.9	28,800	26.8	6.6	86.8	7.8
BG03A	1-2	ND	ND	14.7	21.4	11,600	9.2	18.4	18.4	7.3
	5-6	ND	ND	21.5	23.3	19,000	15.3	6.7	6.7	7.4
	7-8	ND	ND	33.4	35.6	27,100	23.8	9.2	9.2	7.5
	10-11	ND	ND	21.4	25.2	19,400	17.3	6.0	7.8	7.2
BG03B	1-2	ND	ND	11.1	17	8,840	12	21.1	21.1	7.6
	5-6	ND	ND	20.6	28	18,100	16.2	6.8	6.8	8.0
	7-8	ND	ND	17.8	20.7	16,200	12.6	6.5	6.5	7.7
	10-11	ND	ND	21.2	25.5	19,700	17.4	5.2	5.2	7.3
BG04A	1-2	ND	ND	16.3	14.4	14,500	10	14.3	14.3	7.6
	5-6	ND	ND	22.8	21.0	19,200	14.3	7.0	7.0	7.5
	7-8	ND	ND	16.8	19.3	15,300	11.2	5.1	5.1	7.9
	10-11	ND	ND	15.0	17.0	13,700	10.3	ND	ND	8.0
BG04B	1-2	ND	ND	16.6	23.4	14,400	11.1	22	22	7.4
	5-6	ND	ND	21.3	19.4	19,000	14.6	6.2	6.2	7.9
	7-8	ND	ND	21.8	23.2	19,000	14.2	5.2	5.2	7.9
	10-11	ND	ND	18.6	17.7	14,200	11.2	ND	ND	7.4
FeCl-SB04	1	1.7	1.8	711	463	17,300	42.7	243	413	8.0
	5	1.9	ND	558	461	22,400	50.9	188	500	9.2
	11.5	ND	ND	17.6	20.7	16,600	14.2	ND	34.8	6.7
	15	ND	ND	8.5	12.2	9,790	7.7	ND	21.3	7.4

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth
ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	19	ND	ND	8.6	15.0	11,100	9.9	ND	28.2	7.8
MW01D	2	40.4	ND	10,400	13,900	47,400	28,400	517	40,100	7.6
	5.5	2.8	ND	3,800	2,900	24,400	624	61.8	2,840	8.3
	10.5	ND	0.73	40.7	49.3	25,300	30.2	ND	65.6	8.1
	15.5	ND	ND	8.4	11.2	24,100	5	ND	13.9	8.1
	20.5	ND	ND	6.7	11.3	6,960	6.7	ND	20.5	8.0
	25.5	ND	ND	6.1	9.5	6,040	7.2	ND	17.9	7.7
	30.5	ND	ND	17.4	27.6	18,400	18.3	ND	50.5	7.7
	40.5	ND	ND	26.0	41.8	21,500	25.5	6.5	64.8	7.9
	65.5	ND	ND	28.4	49.6	4,360	27.4	6.2	64.8	8.1
	97	ND	ND	22.8	25.4	17,200	21.5	ND	50.5	8.3
MW06D	5.5	ND	ND	26.	524	21,400	746	ND	279	5.1
	10	0.57	ND	27.4	604	21,800	668	11.4	309	4.9
	15	ND	ND	6.4	17.9	6,830	7.8	ND	20.3	8.2
	25	ND	ND	18.2	28.1	19,500	17.9	ND	56.3	7.4
	40	ND	ND	27.1	43.7	25,000	24.	5.4	60.2	7.2
	60	ND	ND	6.3	6.1	5,970	5.1	ND	13.7	7.9
	95	ND	ND	23.4	25.8	19,100	20.9	6.9	69.8	7.9
MW12D	25	ND	ND	14.2	16.9	14,100	13.3	5.2	43.1	8.4
	65	ND	ND	5.8	6.4	5,580	4.2	ND	14.2	7.9
	100	ND	ND	21.4	26.8	18,400	21.6	ND	45.4	8.6
MW13D	25	ND	ND	6.6	8.2	7,410	6.7	ND	21.9	8.1
	65	ND	0.74	94.4	33.9	14,400	14.5	ND	47.7	10.2
	95	ND	ND	20.0	29.9	18,100	19.4	ND	50.5	8.3
MW14D	25	ND	24.5	268	39.9	5,580	4.9	ND	16.6	4.4
	65	ND	16.3	18.3	23.3	15,300	19.7	ND	58.6	6.8
	110	ND	0.30	133	66.6	16,400	16.0	ND	43.3	7.8

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TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
MW15D	19.5	ND	ND	5.2	7.0	6,440	4.6	ND	17.2	9.0
	62.5	0.76	ND	12.0	57.4	8,820	9.6	6.3	107	8.2
	105.5	ND	ND	5.8	29.8	6,260	5.6	ND	18.7	7.8
	125.5	ND	ND	4.5	17.1	6,620	4.2	ND	25.6	8.4
PI01	2.5	5.1	ND	37,000	1,180	20,900	39	61.3	126	10.0
	3	1.6	ND	2,360	1,120	17,400	41.4	6.4	108	9.9
	7	1.1	4.0	136	176	18,500	17.7	ND	39.9	8.6
	12	ND	94.5	894	91.3	30,300	26.8	ND	67.4	4.1
	17	ND	1.8	91.6	19.0	8,810	7.1	ND	22.4	8.3
	21.5	ND	61.2	239	24.7	9,930	8.5	ND	22.2	4.1
	27	ND	5.9	1,420	66.0	20,500	17.6	ND	47.4	8.4
	37	ND	ND	225	251	36,900	119	7.8	109	3.6
PI02	0	2.9	15.6	2,980	2,110	18,300	205	81.3	130	10.1
	1.5	0.90	ND	1,780	23.7	15,700	14.8	ND	40.3	9.2
	5/4.5	ND	ND	33.1	28.0	21,800	20.6	5.4	50.9	7.2
	16/11	ND	14.4	2,960	1,040	15,900	25.1	34.4	92.5	9.2
	22/16.5	ND	24.4	755	52.5	12,600	10.3	ND	29.1	4.2
	26.5/23	ND	30.9	600	33.4	6,870	5.4	ND	13.6	4.3
	32/35	1.2	199	2,190	299	21,800	34.2	ND	75.3	3.2
	45/36.5	2.5	ND	50.2	59.4	30,000	35.2	10.4	77.7	5.9
PI03	0.5	ND	143	6,940	908	41,300	12.9	641	24.7	9.3
	1.5	ND	ND	1,870	604	13,300	39.6	63.5	115	9.5
	5	2.9	5.6	1,380	1,260	22,100	90.5	6.4	78.3	8.8
	11.5	ND	5.7	465	107	15,800	15.0	5.9	36.4	8.6
	16	ND	9.9	714	218	18,200	23.5	21.6	43.6	8.5
	20.5	ND	4.4	274	98.4	7,780	12.6	ND	27.6	8.7
	25.5	ND	17.1	218	84.3	5,890	10.8	ND	24.6	5.2

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TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	35.5	ND	1.5	124	408	29,400	72.4	ND	120	3.7
PI04	1	2	ND	552	323	19,100	309	1,090	872	7.9
	2	2.6	ND	28.4	82.5	10,500	41.7	1,660	1,170	8.2
	6	ND	ND	1,870	17,400	29,300	652	704	476	8.3
	11	ND	ND	37.5	53.8	31,500	30	8.8	63.7	7.2
	17	ND	ND	13.3	22.2	13,300	12.3	ND	35	7.3
	21.5	ND	ND	6.3	11.3	6,080	5.1	ND	16	7.0
	26.5	ND	ND	25.8	10.4	9,020	16.6	ND	26.1	8.7
	36	ND	ND	30.0	94.0	11,000	13.8	15.4	36.6	7.5
PI05	1	1.4	ND	65.2	1,580	28,400	134	1,010	584	7.7
	1.5	2.0	21.4	62.7	980	18,000	45.9	2,830	1,070	6.7
	5	ND	ND	34.2	314	20,800	24.0	26.6	210	4.5
	10	ND	ND	33.0	39.4	28,200	28.3	10.6	57.8	6.2
	15	ND	ND	13.6	14.3	10,700	11.6	ND	26.4	6.4
	20	ND	ND	8.4	21.2	9,380	12.1	ND	40.6	6.5
	25	ND	2.1	37.8	32.0	10,200	7.3	ND	24.9	6.9
	35	ND	7.9	42.9	29.0	19,600	68.3	ND	135	6.2
PI06	1	4.6	ND	1,710	7,090	17,600	340	885	2,790	9.1
	1.5	1.7	ND	293	3,950	16,600	217	416	1,550	9.0
	5	ND	ND	23.9	201	23,400	46.5	ND	86.8	9.2
	10	5.1	ND	1,140	2,550	16,700	237	684	1,690	9.3
	15	ND	7.9	76.5	63.5	12,000	15.8	ND	171	8.6
	20	ND	3.1	58.8	14.7	9,790	11.0	ND	101	8.2
	25	ND	7.5	70.3	55.7	6,080	13.7	ND	67.2	8.5
	35	9.0	143	138	34.7	22,800	23.1	6.1	63.2	6.3
PI07	0	24.2	ND	2,050	3,390	30,200	498	4,200	21,100	9.4
	5	ND	ND	26.1	751	23,200	53.6	ND	113	9.0

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.
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ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	10	0.82	0.74	61.5	42.6	26,400	28.6	6.2	63.7	6.7
	15	ND	10.4	867	88.4	10,100	8.9	ND	24.6	4.5
	20	ND	8.9	429	50.1	9.770	8.7	ND	26.0	4.4
	25	ND	7.4	462	33.6	7,090	4.4	ND	13.8	4.6
	35	ND	61.8	720	409	23,300	70.4	5.6	106	3.4
RSO1	1	ND	ND	138	20.0	1,780	58.9	ND	64.8	9.1
	3	5.0	ND	779	215	7,490	788	13.8	165	6.1
	5	1.4	ND	19.4	83	16,300	30.7	ND	150	7.4
	10	ND	ND	20.9	24.9	18,800	19.3	6.0	47.8	8.5
	15	ND	ND	14.9	19.4	15,000	14.0	ND	37.9	8.2
	20	ND	ND	4.6	6.3	5,160	4.1	ND	14.4	8.4
	30	ND	ND	6.5	8.4	6,700	5.6	ND	18.7	8.2
	40	ND	1.2	28.4	38.2	23,800	24.3	5.7	61.9	8.7
RSO2	1	1.9	ND	250	346	16,600	63.2	143	99.7	3.0
	3	1.0	0.77	221	774	10,600	65.7	41	104	3.5
	5	6.5	ND	38.2	206	21,300	363	116	2,940	6.3
	10	ND	ND	33.5	116	30,600	59.1	11.0	225	4.6
	15	3.1	ND	13.4	17.7	14600	30.6	5.0	299	7.1
	20	1.0	ND	5.8	8.0	7,250	7.7	ND	65.2	6.8
	30	0.60	ND	5.2	6.6	5,380	7.1	ND	75.3	5.8
	40	ND	ND	32.6	48.7	31,000	32.6	15.2	81.0	8.7
RS03	1	14.2	ND	37.3	91.9	13,100	100	6,650	3,700	7.4
	3	161	ND	3,140	19,100	15,600	390	113,000	23,800	6.1
	5	2.6	ND	4,040	767	19,300	55.3	911	916	8.8
	10	ND	ND	22.6	29.9	19,600	22.1	12.9	62.1	7.8
	15	8.6	ND	26.5	45.6	21,200	21.8	47.6	61.9	7.1
	20	ND	4.0	7.3	17.6	8,980	7.5	9.8	26.8	7.3

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth
ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	30	ND	ND	6.3	11.8	6,270	5.2	8.5	19.7	7.2
	40	ND	7.4	31	47.1	29,400	32.1	19.6	81.0	7.0
RS04	1	7.2	4.8	63.5	152	15,900	21.2	2,410	1,230	7.9
	3	ND	138	26.1	276	20,000	28.0	20.0	333	8.6
	5	0.80	ND	34.4	259	19,800	30.2	59.2	366	8.8
	10	ND	8.2	16	26.4	17,200	16.3	7.7	49.5	7.8
	15	ND	2.1	15.5	26.5	15,400	15.0	5.3	41.2	8.1
	20	ND	4.4	4.2	9.7	4,480	ND	ND	14.4	8.4
	30	ND	1.6	5.8	10.5	6,090	5.3	5.5	19.6	7.3
	40	ND	12.2	27.1	52.4	24,200	25.5	23.6	78.4	7.0
RS05	1	ND	ND	177	25.2	1,530	9.6	12.4	14.1	8.9
	3	ND	ND	64.0	81.5	18,300	25.8	898	89.5	8.6
	5	21.3	ND	383	276	11,400	95.5	228	360	8.8
	10	2.6	ND	155	138	17,800	58.6	194	376	8.6
	15	ND	ND	20.1	22.1	18,800	17.3	ND	40.4	7.6
	20	ND	ND	8.1	9.3	10,600	7.7	ND	20	6.9
	30	ND	ND	12.8	14.0	10,900	9.3	ND	26.9	7.5
	40	ND	ND	31.4	45.8	30,300	33.7	13.0	74.1	8.3
RS06	1	2.0	ND	279	1,050	30,200	536	33.5	49.8	8.6
	3	1.7	ND	213	415	18,600	24.4	1,590	300	8.4
	5.5	ND	ND	17.2	26.5	12,800	10.8	13.4	37.6	8.1
	10	ND	ND	27.5	20.2	15,300	13.5	ND	35.3	7.7
	15	ND	ND	13.3	16.1	13,400	12.3	ND	29.8	7.8
	20	ND	ND	7.9	15.0	9,350	7.6	ND	20.4	8.0
	30	ND	ND	17.4	18.9	15,800	13.4	ND	38.8	7.4
	40	ND	ND	28.6	37.9	23,800	25.6	5.3	62.7	7.6
SB01	12	0.69	ND	39.6	159	23,400	37.7	164	711	7.2

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth
ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	15	ND	ND	23.0	37.9	21,400	21.6	5.7	53.6	7.5
	20.5	ND	ND	7.3	9.8	7,700	5.9	ND	18.7	7.9
	30.5	ND	ND	17.1	23.7	18,300	16.7	5.5	46.1	7.5
	40	ND	ND	24.6	41.2	22,900	23.3	10.8	65.4	8.4
SB02	1	40.9	29.4	1190	7,560	49,700	1,000	14,800	30,800	6.7
	5	9.8	13.2	109	1,480	12,600	246	1,430	8,840	8.8
	10	21.4	ND	272	16,400	26,300	936	2,850	14,900	6.8
	15	ND	ND	22.7	31.4	20,200	20.8	6.0	52.7	7.7
	20.5	ND	ND	9.0	11.2	8,530	6.9	8.2	30.9	7.6
	30	ND	ND	20.0	29.3	20,400	19.6	ND	54.7	5.0
	40.5	ND	ND	34.4	44.2	30,200	31.6	12.5	81.1	7.2
SB03	5	ND	ND	33.5	24.6	28,200	78.5	ND	6,040	7.3
	10	ND	ND	46.6	35.2	32,100	31.9	15.0	120	7.5
	15.5	ND	ND	44.5	39.0	30,200	31.5	20.6	157	7.6
	20	ND	ND	7.8	8.5	9,720	16.7	ND	1,460	5.3
	30	1.5	ND	20.3	31.5	18,700	49.0	9.0	4,490	4.6
	40	ND	ND	22.1	29.1	19,500	20.5	6.2	69.0	7.8
SB04	6	0.30	ND	65.0	120.0	13,000	12.0	29.0	59.0	11.41
	16	0.10	12.2	160	33.0	8,400	8.1	2.0	25.0	5.34
	21	0.13	12.6	120	27.0	5,700	6.9	0.84	22.0	4.79
	25.5	0.07	51.1	400	32.0	6,900	6.2	1.0	16.0	4.32
	31	0.06	11.9	810	94.0	9,700	11.0	1.7	30.0	3.78
	36	0.07	11.8	80.0	90.0	5,200	7.2	0.66	16.0	4.76
	49	0.25	26.9	75.0	720	6,100	41.0	0.85	81.0	4.95
SB05	5.5	1.3	ND	400	520	25,000	46.0	110	380	10.93
	10.5	ND	4.47	720	47	16,000	9.9	2.7	120	7.96
	15.5	ND	7.27	1,200	57	16,000	12	3.1	190	4.69

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth
ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	20.5	ND	2.68	410	57	12,000	11	2.0	240	4.61
	25.5	ND	3.65	920	160	20,000	20	3.0	260	4.21
	30	0.5	3.02	350	160	15,000	24	3.6	360	4.07
	35.5	0.1	ND	110	40	9,200	6.0	0.94	68	4.52
	45.5	ND	3.26	220	120	8,100	13	4.4	40	4.70
SB06	6	0.8	1.84	310	230	48,000	24	58	130	9.78
	11	1.3	ND	940	140	35,000	22	8.5	36	3.08
	15.5	0.3	ND	280	23	15,000	5.0	2.8	8.2	3.24
	21	0.18	ND	46	15	7,100	3.0	3.3	4.7	3.14
	25.5	0.30	ND	48	22	14,000	4.3	5.1	4.5	3.24
	31	0.37	ND	44	280	18,000	55	3.7	41	3.30
	37	0.12	ND	7.0	29	13,000	5.8	0.87	10	3.87
	46	0.13	ND	6.1	64	8,000	15	12	19	3.77
SB07	3	1.9	73.2	8,030	6,490	27,300	247	860	1,010	7.5
	5.5	ND	1,040	12,000	448	57,000	12.9	180	27.1	4.2
	10.5	ND	216	5,540	2,590	28,300	134	11.7	86.3	3.7
	15.5	ND	312	2,200	2,470	20,400	47.0	ND	62.6	3.9
	20.5	ND	906	7,130	1,400	12,800	45.4	ND	45.8	3.9
	30.5	ND	330	2,700	1,650	20,500	74.2	11.6	75.2	3.3
	40.5	6.4	1,160	979	65.6	26,100	25.7	7.1	60.3	6.5
SB08	5	ND	ND	26.5	2,900	39,000	905	236	360	2.6
	10.5	ND	ND	47.4	704	41,400	405	14.7	171	3.5
	15.5	ND	ND	5.9	782	6,890	44.7	ND	24.8	4.1
	20.5	ND	ND	7.5	152	10,100	118	ND	37.8	3.0
	30.5	ND	ND	18.0	38.8	18,900	19.2	ND	48.4	7.0
	40.5	ND	ND	37.2	66.9	35,600	35.4	21.0	83.3	8.6
UST-SB02	11/10	NA	NA	NA	NA	NA	NA	NA	NA	7.45

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth
ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Subsurface Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
	16.5/15	NA	NA	NA	NA	NA	NA	NA	NA	7.98
UST-SBO3	25/23	NA	NA	NA	NA	NA	NA	NA	NA	8.22
	40.5/36.8	NA	NA	NA	NA	NA	NA	NA	NA	7.75
UST-SB04	20/18.4	NA	NA	NA	NA	NA	NA	NA	NA	8.62
	35/32.2	NA	NA	NA	NA	NA	NA	NA	NA	8.35
UST-SB05	5.5	NA	NA	NA	NA	NA	NA	NA	NA	7.81
UST-SB07	5.5/4.5	NA	ND	22.1	NA	NA	NA	NA	NA	NA
	17/15	NA	ND	12.3	NA	NA	NA	NA	NA	NA
	40/34.5	NA	ND	27.9	NA	NA	NA	NA	NA	NA

FILE NAME: NSOLMETD.WK1

Shaded Box Indicates Value is Greater Than One Order of Magnitude Above Background.

Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-4
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Arsenic, Cyanide and Mercury Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Arsenic EPA-7060	Cyanide Total EPA-9010	Cyanide Amenable EPA-9010	Mercury EPA-7471
SURFACE SOIL SAMPLES					
DD04	1-2	7.60	ND	NA	ND
DD05	1-2	10.40	ND	ND	ND
DD06	1-2	15.00	ND	NA	0.19
PL-HB01	0.5-1	5.70	0.72	0.72	ND
	3-4	8.40	ND	ND	ND
	5-6	9.00	ND	ND	ND
WMU18/19	1-2	7.60	ND	*	ND
	3-4	19.00	ND	*	ND
	5-6	13.00	ND	*	ND
ACTIVE SUMP SLUDGE SAMPLES					
WMU36B	2.5	5.50	ND	ND	0.22
SUBSURFACE SOIL SAMPLES					
FeCl-SB04	1	ND	ND	ND	ND
	5	ND	ND	ND	ND
	11.5	ND	ND	ND	ND
MW15D	19.5	ND	ND	ND	ND
	62.5	ND	ND	ND	NA
	105.5	ND	ND	ND	NA
	125.5	ND	ND	ND	NA
PI01	2.5	72.00	ND	ND	0.35
	3	21.00	ND	ND	NA
	7	5.30	ND	ND	NA
	12	8.80	ND	ND	NA
	17	3.30	ND	ND	ND
	21.5	3.70	ND	ND	NA
	27	7.40	ND	ND	NA
	37	19.20	0.83	0.79	ND
RS06	20	2.80	NA	NA	NA
SB02	1.5	58.00	1.50	ND	0.88
	5	ND	ND	ND	NA
	10	ND	ND	ND	NA
	15.5	8.80	ND	ND	0.28
	20.5	ND	ND	ND	NA
	30	ND	ND	ND	NA
	40.5	ND	ND	ND	ND
SB07	3.5	15.00	1.30	ND	1.50
	5.5	ND	ND	ND	NA
	10.5	ND	ND	ND	NA

ND = Parameter Not Detected NA = Parameter Not Analyzed

* Sample Not Analyzed Due to Matrix Interference and Non-Detection of Total Cyanide

TABLE 4-4
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Arsenic, Cyanide and Mercury Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Arsenic EPA-7060	Cyanide Total EPA-9010	Cyanide Amenable EPA-9010	Mercury EPA-7471
	15.5	ND	ND	ND	NA
	20.5	ND	ND	ND	NA
	30.5	ND	ND	ND	ND
	40	31.00	ND	ND	0.59
	40.5	ND	ND	ND	NA
SB08	5	ND	ND	ND	ND
	10.5	ND	ND	ND	NA
	15.5	ND	ND	ND	ND
	20.5	ND	ND	ND	ND
	30.5	ND	ND	ND	NA
	40.5	ND	ND	ND	ND
UST SB07	5.5	4.9	ND	ND	ND
	17	4.1	ND	ND	ND
	40.5	18	ND	ND	ND

FILE NAME: NSOLCAM.WK1

ND = Parameter Not Detected NA = Parameter Not Analyzed

* Sample Not Analyzed Due to Matrix Interference and Non-Detection of Total Cyanide

REVISED 3-10-92

TABLE 4-5
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Halocarbons Analytical Results
(ug/kg)

Soil Boring	Depth (Feet)	Tri-chloro-ethene (TCE)	Tetra-chloro-ethene (PCE)	1,1-Di-chloro-ethene (1,1-DCE)	1,1-Di-chloro-ethane (1,1-DCA)	Total 1,2-Di-chloro-ethene (1,2-DCE)	1,1,1-Tri-chloro-ethane (1,1,1-TCA)	Chloroform (CHCL3)	Methylene chloride (CH2CL2)	Acetone	2-Butanoe
SURFACE SOIL SAMPLES											
WMU18/19	1-2	9	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3-4	ND	ND	ND	ND	ND	ND	ND	ND	120	ND
WMU20B	2.2	2600	ND	ND	ND	ND	ND	ND	ND	NA	NA
WMU46E	3.5	ND	ND	ND	ND	ND	ND	ND	28	ND	ND
ACTIVE SUPM SLUDGE SAMPLES											
WMU36B	2.5	ND	ND	ND	ND	ND	ND	ND	ND	210	ND
SUBSURFACE SOIL SAMPLES											
FeCl-SB04	0.5	ND	ND	ND	ND	ND	ND	ND	9.0	ND	ND
	5.5	110	11	ND	ND	6	ND	ND	10	38	11
	11	ND	ND	ND	ND	ND	ND	ND	8	ND	ND
MW12D	4	110	10	ND	ND	ND	ND	ND	ND	ND	ND
	45	54	ND	ND	7	ND	ND	ND	6	ND	ND
PI01	3	ND	ND	ND	ND	ND	ND	ND	26	60	ND
	7	ND	ND	ND	ND	ND	ND	ND	11	ND	ND
	27	6	ND	ND	8	ND	ND	ND	8	ND	ND
	36.5	ND	ND	ND	6.0	ND	ND	ND	14	ND	ND
PI04	21.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	13
RS06	3	110000	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB02	1.5	ND	ND	ND	ND	ND	ND	ND	31	ND	ND
	5.5	ND	ND	ND	ND	ND	ND	ND	13	ND	ND
	10.5	ND	ND	ND	ND	ND	ND	ND	120	20	10
	15.5	ND	ND	ND	ND	ND	ND	ND	29	ND	ND
	20.5	ND	ND	ND	ND	ND	ND	ND	26	ND	ND
	30.5	ND	ND	ND	ND	ND	ND	ND	6	ND	ND

*Analyses by EPA 8010, all others by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-5
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Halocarbons Analytical Results
(ug/kg)

Soil Boring	Depth (Feet)	Tri-chloro-ethene (TCE)	Tetra-chloro-ethene (PCE)	1,1-Di-chloro-ethene (1,1-DCE)	1,1-Di-chloro-ethane (1,1-DCA)	Total 1,2-Di-chloro-ethene (1,2-DCE)	1,1,1-Tri-chloro-ethane (1,1,1-TCA)	Chloroform (CHCL3)	Methylene chloride (CH2CL2)	Acetone	2-Butanoe
	40	ND	ND	ND	ND	ND	ND	ND	6	ND	ND
SB04	6*	90	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB05	5.5*	125	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB07	3.5	4800	ND	ND	650	ND	ND	510	510	ND	ND
	5	910	310	ND	ND	ND	1400	ND	ND	ND	ND
	10	260	58	ND	84	59	550	62	350	ND	ND
	15	62	ND	ND	ND	ND	78	45	430	90	ND
	20	4300	1200	ND	ND	ND	2900	ND	ND	ND	ND
	30	ND	ND	ND	ND	ND	ND	38	460	710	ND
	40	ND	ND	ND	ND	ND	ND	96	200	990	ND
SB08	10	ND	ND	ND	ND	ND	ND	ND	40	ND	ND
	15	ND	ND	ND	ND	ND	ND	ND	26	ND	ND
	20	ND	ND	ND	ND	ND	ND	ND	55	ND	ND
	40	ND	ND	ND	ND	ND	ND	ND	ND	22	ND
UST-SB07	17/15*	ND	ND	ND	ND	ND	ND	ND	1100	ND	ND
	40.5/35*	ND	ND	ND	ND	ND	ND	ND	290	ND	ND

FILE NAME: NSOLCHL.WK1

*Analyses by EPA 8010, all others by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-6
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
PCB's & Semi-Volatile Analytical Results
(ug/kg)

Soil Boring	Depth (Feet)	Aroclor 1260 EPA-8080	Aroclor 1254 EPA-8080	2-Methyl-naph-thalene EPA-8270	1,2,4-Tri-chloro-benzene EPA-8270	Di-n-butyl-phthal-ate EPA-8270	bis (2-Ethyl-hexyl)-phthal-ate EPA-8270	Pyrene EPA-8270
SURFACE SOIL SAMPLES								
DD01	1-2	880	ND	NA	NA	NA	NA	NA
DD02	1-2	ND	ND	ND	ND	ND	ND	ND
DD04	1-2	ND	ND	ND	ND	ND	ND	ND
DD05	1-1.5	ND	ND	ND	ND	400	ND	ND
DD06	1-1.5	200	ND	ND	ND	ND	410	ND
LAB-HB01	0.5-1	4,200	ND	NA	NA	NA	NA	NA
	1-2	430	ND	NA	NA	NA	NA	NA
	3-4	90	ND	NA	NA	NA	NA	NA
PL-HB01	0.5-1	3,000	ND	ND	ND	ND	ND	ND
	5-6	17	ND	ND	ND	ND	ND	ND
WMU18/19	1-2	3,900	ND	ND	ND	ND	ND	1,300
SLUDGE SAMPLES								
WMU36B	2.5	ND	16	ND	ND	ND	4,300	ND
SUBSURFACE SOIL SAMPLES								
FeCl-SB02	1	21,000	ND	NA	NA	NA	NA	NA
	5	80,000	ND	NA	NA	NA	NA	NA
	11.5	60	ND	NA	NA	NA	NA	NA
FeCl-SB03	1	23,000	ND	NA	NA	NA	NA	NA
	5	15,000	ND	NA	NA	NA	NA	NA
FeCl-SB04	0.5	11,000	ND	ND	ND	ND	ND	ND
	5.5	4,400	ND	ND	1,200	ND	ND	ND
FeCl-SB06	1	50,000	ND	NA	NA	NA	NA	NA
	5.5	6,500	ND	NA	NA	NA	NA	NA
FeCl-SB07	5	4,000	ND	NA	NA	NA	NA	NA
	11	ND	100	NA	NA	NA	NA	NA
PI01	2	1,100	ND	NA	NA	NA	NA	NA
SB07	3.5	1,700	ND	ND	ND	ND	ND	ND
SB08	5.5	ND	ND	26,000	ND	ND	ND	ND

FILE NAME: SOLSEMI.WK1

ND = Parameter Not Detected
NA = Parameter Not Analyzed

TABLE 4-7
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	Total Organic Carbon EPA-9060	Total Organic Solids EPA-160.3	TPH (Extractable) EPA-8015M	TPH (Volatile) EPA-8015M	Soil Moisture (%) ASTM-D2216-80	Bulk Density (g/cc) ASTM-C559-79
SURFACE SOIL SAMPLES											
DD02	2	ND	ND	ND	ND	NA	NA	5400	NA	NA	NA
RR05	1-2	ND	ND	ND	ND	4750	NA	NA	NA	NA	NA
UST-HB01	17*	1	3	0.4	6	NA	NA	16000	ND	NA	NA
UST-HB02	18*	2	37	6	310	NA	NA	3200	ND	NA	NA
UST-HB03	17*	1	7	0.6	11	7130	NA	5700	150	6	1.6
UST-HB04	16.5*	1	7	ND	13	NA	NA	4100	ND	NA	NA
UST-HB05	18*	5	17	1	45	18950	NA	5300	230	11	1.7
WMU18/19	1-2	ND	ND	0.009	0.01	NA	NA	NA	NA	NA	NA
WMU20B	2.2	ND	ND	ND	ND	3.71	NA	NA	NA	NA	NA
WMU23B	1.5*	ND	ND	ND	ND	NA	NA	4000	ND	NA	NA
WMU35B	7*	ND	ND	ND	ND	NA	NA	1000	NA	NA	NA
WMU42	4.5*	ND	ND	ND	ND	NA	NA	16400	ND	NA	NA
WMU46A	4*	ND	ND	ND	ND	44260	NA	8500	NA	NA	NA
WMU46B	10.5*	ND	ND	ND	ND	2650	NA	200	NA	NA	NA
	20*	ND	ND	ND	ND	3210	NA	3100	NA	NA	NA
	30*	ND	ND	ND	ND	1920	NA	520	NA	NA	NA
	35*	ND	ND	0.026	ND	1250	NA	ND	NA	NA	NA
WMU46C	2	ND	ND	ND	ND	8140	NA	NA	NA	NA	NA
WMU46D	3.5	ND	ND	0.26	ND	NA	1.3	NA	NA	NA	NA
WMU46E	3.5	ND	ND	0.33	ND	NA	1.5	NA	NA	NA	NA
	15*	ND	ND	0.0098	ND	NA	NA	ND	NA	NA	NA
	25*	ND	ND	0.028	ND	NA	NA	ND	NA	NA	NA

*Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8020, no asterisk indicate Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-7
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	Total Organic Carbon EPA-9060	Total Organic Solids EPA-160.3	TPH (Extractable) EPA-8015M	TPH (Volatile) EPA-8015M	Soil Moisture (%) ASTM-D2216-80	Bulk Density (g/cc) ASTM-C559-79
ACTIVE SUMP SLUDGE SAMPLES											
WMU36B	2.5	ND	0.006	0.057	0.033	NA	NA	NA	NA	NA	NA
SUBSURFACE SOIL SAMPLES											
FeCl-SB04	0.5	ND	ND	0.079	ND	NA	NA	NA	NA	NA	NA
	5.5	ND	ND	0.10	0.22	NA	NA	NA	NA	NA	NA
	11	ND	ND	0.04	ND	NA	NA	NA	NA	NA	NA
MW06D	10.5	ND	ND	0.31	ND	NA	0.31	NA	NA	NA	NA
	25.5	ND	ND	0.15	ND	NA	0.25	NA	NA	NA	NA
MW12D	4	ND	ND	ND	ND	6260	NA	NA	NA	NA	NA
MW12D	45	ND	ND	ND	ND	1240	NA	NA	NA	NA	NA
MW13S	20	ND	ND	ND	ND	383	NA	NA	NA	NA	NA
MW14S	5	ND	ND	ND	ND	8570	NA	NA	NA	NA	NA
	49.5	ND	ND	0.01	ND	2850	NA	NA	NA	NA	NA
PI01	2	ND	0.06	1.3	0.41	NA	NA	NA	NA	NA	NA
	3	ND	ND	0.048	ND	NA	NA	NA	NA	NA	NA
PI04	21.5	ND	ND	ND	ND	737	NA	NA	NA	NA	NA
RS06	3	ND	9	ND	43	NA	NA	460	NA	NA	NA
	20	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
SB02	1.5	ND	ND	0.041	ND	NA	NA	NA	NA	NA	NA
	5.5	ND	ND	0.005	ND	NA	NA	NA	NA	NA	NA
	10.5	ND	ND	0.022	ND	NA	NA	NA	NA	NA	NA
	15.5	ND	ND	0.012	ND	NA	NA	NA	NA	NA	NA
	20	ND	ND	0.019	ND	NA	NA	NA	NA	NA	NA
	30.5	ND	ND	0.007	ND	NA	NA	NA	NA	NA	NA

*Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8020, no asterisk indicate Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-7
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	Total Organic Carbon EPA-9060	Total Organic Solids EPA-160.3	TPH (Extractable) EPA-8015M	TPH (Volatile) EPA-8015M	Soil Moisture (%) ASTM-D2216-80	Bulk Density (g/cc) ASTM-C559-79
	40	ND	ND	0.011	ND	NA	NA	NA	NA	NA	NA
SB04	6*	ND	ND	0.065	ND	3880	NA	NA	NA	NA	NA
	16*	ND	ND	ND	ND	420	NA	NA	NA	NA	NA
	21	NA	NA	NA	NA	170	NA	NA	NA	NA	NA
	25.5	NA	NA	NA	NA	170	NA	NA	NA	NA	NA
	31	NA	NA	NA	NA	450	NA	NA	NA	NA	NA
	36*	ND	ND	0.05	ND	130	NA	NA	NA	NA	NA
	49*	ND	ND	ND	ND	210	NA	NA	NA	NA	NA
SB05	5.5*	ND	0.07	0.34	0.21	6400	NA	NA	NA	NA	NA
	10.5	ND	ND	ND	ND	1900	NA	NA	NA	NA	NA
	15.5*	0.7	ND	ND	ND	1400	NA	NA	NA	NA	NA
	20.5	NA	NA	NA	NA	570	NA	NA	NA	NA	NA
	25.5	NA	NA	NA	NA	810	NA	NA	NA	NA	NA
	30.5	NA	NA	NA	NA	480	NA	NA	NA	NA	NA
	35.5*	ND	ND	0.05	ND	140	NA	NA	NA	NA	NA
	45.5*	ND	ND	ND	ND	310	NA	NA	NA	NA	NA
SB06	6*	ND	ND	0.38	ND	9900	NA	NA	NA	NA	NA
	11	NA	NA	NA	NA	920	NA	NA	NA	NA	NA
	15.5	NA	NA	NA	NA	460	NA	NA	NA	NA	NA
	21	NA	NA	NA	NA	320	NA	NA	NA	NA	NA
	25.5	NA	NA	NA	NA	170	NA	NA	NA	NA	NA
	31	ND	ND	ND	ND	560	NA	NA	NA	NA	NA
	37	ND	ND	ND	ND	230	NA	NA	NA	NA	NA
	46	ND	ND	ND	ND	710	NA	NA	NA	NA	NA

*Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8020, no asterisk indicate Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-7
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	Total Organic Carbon EPA-9060	Total Organic Solids EPA-160.3	TPH (Extractable) EPA-8015M	TPH (Volatile) EPA-8015M	Soil Moisture (%) ASTM-D2216-80	Bulk Density (g/cc) ASTM-C559-79
SB07	10	ND	ND	0.086	ND	NA	NA	NA	NA	NA	NA
	15	ND	ND	0.029	ND	NA	NA	NA	NA	NA	NA
	20	ND	0.25	ND	0.76	NA	NA	2300	NA	NA	NA
SB08	5.5	ND	3.3	0.4	ND	NA	NA	4200	NA	NA	NA
	10	ND	ND	0.13	0.056	NA	NA	1500	NA	NA	NA
	15	ND	ND	0.09	ND	NA	NA	NA	NA	NA	NA
	20	ND	0.074	0.054	ND	NA	NA	1500	ND	NA	NA
	30	ND	ND	ND	ND	NA	NA	10	ND	NA	NA
	40	ND	ND	0.011	ND	NA	NA	ND	NA	NA	NA
UST-SB01	11/10*	ND	5	ND	14	NA	NA	2100	ND	NA	NA
	21.5/19*	ND	4	ND	10	NA	NA	2100	ND	NA	NA
	31.5/28*	ND	ND	ND	ND	NA	NA	28	ND	NA	NA
	36/32*	ND	0.1	ND	0.2	NA	NA	93	ND	NA	NA
	41.5/37*	ND	ND	ND	ND	NA	NA	17	ND	NA	NA
UST-SB02	11/10*	2.1	ND	ND	ND	23100	NA	NA	NA	15	2.1
	11.5/10*	ND	4	ND	8	NA	NA	1200	ND	NA	NA
	16.5/15*	1.9	ND	ND	ND	26600	NA	ND	NA	13	1.9
	20.5/18*	ND	13	ND	21	NA	NA	1900	NA	NA	NA
	30.5/27*	0.3		ND	2	NA	NA	3500	NA	NA	NA
	35.5/31.5*	ND	ND	ND	ND	NA	NA	24	NA	NA	NA
	40.5/36*	ND	ND	ND	ND	NA	NA	9	NA	NA	NA
UST-SBO3	10.5/10*	0.2	0.7	0.3	2	NA	NA	1900	55	NA	NA
	20.5/19*	0.2	1	0.3	2	NA	NA	1400	42	NA	NA
	25.5/23*	1.5	ND	ND	ND	NA	NA	NA	NA	5	1.5

*Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8020, no asterisk indicate Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-7
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	Total Organic Carbon EPA-9060	Total Organic Solids EPA-160.3	TPH (Extractable) EPA-8015M	TPH (Volatile) EPA-8015M	Soil Moisture (%) ASTM-D2216-80	Bulk Density (g/cc) ASTM-C559-79
	30.5/28*	3	20	4	20	NA	NA	9900	160	NA	NA
	35/33*	5	29	3	23	NA	NA	3900	210	NA	NA
	40.5/37*	1.7	ND	ND	ND	950	NA	ND	3	21	1.7
UST-SBO4	11/10*	2	11	3	27	NA	NA	3900	150	NA	NA
	20/18.5*	1.6	ND	ND	ND	660	NA	NA	NA	5	1.6
	20.5/18.5*	1	12	1	28	NA	NA	1800	100	NA	NA
	30/27.5*	3	16	5	32	NA	NA	2100	180	NA	NA
	35/32*	1.5	ND	ND	ND	1100	NA	NA	NA	17	1.5
	35.5/32*	ND	0.3	ND	0.8	NA	NA	420	24	NA	NA
	40/37*	ND	ND	ND	ND	NA	NA	ND	2	NA	NA
UST-SB05	5.5*	1.7	ND	ND	9	20700	NA	2000	ND	12	1.7
	10.5*	ND	ND	ND	3	NA	NA	550	ND	NA	NA
	20*	ND	ND	0.2	2	NA	NA	3900	ND	NA	NA
	30.5*	ND	0.6	ND	ND	NA	NA	18	ND	NA	NA
UST-SB06	5.5*	ND	ND	ND	ND	37700	NA	7400	NA	NA	NA
	10*	ND	ND	ND	ND	7010	NA	3100	NA	NA	NA
	20*	ND	ND	ND	ND	2460	NA	2000	NA	NA	NA
	30*	ND	ND	ND	ND	2060	NA	ND	NA	NA	NA
	35*	ND	ND	0.024	ND	2160	NA	ND	NA	NA	NA
UST-SB07	5/4.5*	ND	ND	ND	ND	48500	NA	3800	NA	NA	NA
	9.5/8*	ND	ND	ND	ND	15800	NA	1500	NA	NA	NA
	17.5/15*	ND	14	ND	ND	74600	NA	17000	NA	NA	NA
	32.5/28*	ND	ND	ND	ND	6390	NA	3900	NA	NA	NA
	40/34.5*	ND	ND	ND	ND	4750	NA	530	NA	NA	NA

*Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8020, no asterisk indicate Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-7
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	Total Organic Carbon EPA-9060	Total Organic Solids EPA-160.3	TPH (Extractable) EPA-8015M	TPH (Volatile) EPA-8015M	Soil Moisture (%) ASTM-D2216-80	Bulk Density (g/cc) ASTM-C559-79
	45/39*	ND	ND	ND	ND	2040	NA	ND	NA	NA	NA
UST-SB09	10.5*	ND	ND	ND	ND	2190	NA	ND	NA	NA	NA
	20*	ND	ND	ND	ND	907	NA	ND	NA	NA	NA
	30*	ND	ND	0.016	ND	1650	NA	ND	NA	NA	NA
	35*	ND	ND	ND	ND	1590	NA	ND	NA	NA	NA
UST-SB10	10*	ND	ND	ND	ND	11700	NA	3700	NA	NA	NA
	20*	ND	ND	ND	ND	2540	NA	1500	NA	NA	NA
	30*	ND	ND	0.0098	ND	1940	NA	ND	NA	NA	NA
	35*	ND	ND	0.014	ND	2600	NA	ND	NA	NA	NA
UST-SB11	10*	ND	ND	ND	ND	14600	NA	2900	NA	NA	NA
	20*	ND	1	0.12	1.2	3660	NA	1900	NA	NA	NA
	30*	ND	ND	0.016	ND	1690	NA	110	NA	NA	NA
	35*	ND	ND	0.019	ND	2280	NA	ND	NA	NA	NA

FILE NAME: SOLUST2.WK1

*Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8020, no asterisk indicate Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Where soil depths are listed as A/B, A = slant boring depth, and B = actual boring depth

TABLE 4-8
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Soil Sampling
TCLP Analytical Results
(mg/L)

Soil Boring	Depth (Feet)	Chromium (Hexavalent) EPA-7196-L	Chromium (Total) EPA-6010-L	Iron EPA-6010-L	Zinc EPA-6010-L
SUBSURFACE SOIL SAMPLES					
FeCl-SB04	1	ND	ND	0.13	ND
MW15D	62.5	ND	ND	ND	0.20
PI01	12	1.0	0.12	ND	ND
SB02	1	ND	ND	ND	5.2
SB07	40.5	9.4	0.92	ND	ND

FILE NAME: SOLTCLP.WK1

ND = Parameter Not Detected
NA = Parameter Not Analyzed
Note: Total Chromium is less than Hexavalent Chromium due to a lower mobility than Hexavalent Chromium.

TABLE 4-9
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Surface Soil Sampling
DHS Metals and PCB Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Arsenic EPA-6010	Barium EPA-6010	Cadmium EPA-6010	Chromium (Total) EPA-6010	Copper EPA-6010	Molybdenum EPA-6010	Nickel EPA-6010	Lead EPA-6010	Vanadium EPA-6010	Zinc EPA-6010	PCB 1260 EPA-8080
SPRR-01	0.5 - 1	<50	150	7	720	1500	<50	<50	560	<50	1300	680
SPRR-02	0.5 - 1	<50	150	5	1100	1200	160	83	470	<50	1100	1500
SPRR-03	0.5 - 1	<50	160	<5	<50	90	<50	<50	<50	83	210	54
SPRR-04	0.5 - 1	<50	130	<5	530	1100	90	55	310	50	690	970
SPRR-05	0.5 - 1	<50	<50	<5	250	430	<50	<50	230	55	480	770
SPRR-06	0.5 - 1	<50	150	<5	<50	550	<50	<50	220	55	310	160
SPRR-07	0.5 - 1	<50	200	<5	270	500	85	60	460	60	410	180
SPRR-08	0.5 - 1	<50	183	<5	<50	<50	<50	<50	<50	75	75	<0.5
SPRR-09	0.5 - 1	<50	115	<5	<50	110	<50	55	310	<50	240	ND
SPRR-10	0.5 - 1	<50	55	<5	<50	50	<50	<50	<50	<50	55	6.3
SPRR-11	0.5 - 1	<50	170	<50	65	220	<50	<50	<50	75	120	3.6
SPRR-12	0.5 - 1	<50	150	<50	<50	75	<50	<50	<50	<50	93	1.7
SPRR-13	0.5 - 1	<50	180	<50	90	530	<50	90	80	90	510	100
SPRR-14	0.5 - 1	95	95	<50	<50	170	<50	<50	155	<50	150	9.8
SPRR-15	0.5 - 1	<50	70	<50	<50	<50	<50	<50	<50	<50	100	<0.5
SPRR-16	0.5 - 1	<50	130	<50	50	160	<50	<50	150	59	250	1.0
SPRR-17	0.5 - 1	<50	120	<50	<50	56	<50	<50	<50	60	110	1.3
SPRR-18	0.5 - 1	280	70	<50	90	340	<50	<50	110	<50	170	9.2
SPRR-19	0.5 - 1	<50	140	<50	<50	60	<50	<50	<50	<50	65	ND
SPRR-20	0.5 - 1	70	60	<50	60	140	<50	<50	50	<50	120	0.7
SCCDM-1	0.5 - 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	180
SCCDM-2	0.5 - 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	710
SCCDM-3	0.5 - 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	450
SCCDM-4	0.5 - 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	660
SCCDM-11	0.5 - 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15
SCCDLR-1	0.5 - 1	<22	170	<22	1500	770	<44	70	490	<44	480	260
SCCDLR-2	0.5 - 1	<25	220	<25	1200	2100	<25	130	620	34	1300	190
SCCDLR-3	0.5 - 1	<23	140	<23	660	400	<23	35	230	36	370	120

TABLE 4-9
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Surface Soil Sampling
DHS Metals and PCB Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Arsenic EPA-6010	Barium EPA-6010	Cadmium EPA-6010	Chromium (Total) EPA-6010	Copper EPA-6010	Molybdenum EPA-6010	Nickel EPA-6010	Lead EPA-6010	Vanadium EPA-6010	Zinc EPA-6010	PCB 1260 EPA-8080
SCCDLR-4	0.5 - 1	44	180	<24	1700	5600	<24	150	1200	<48	1800	69
SCCDLR-5	0.5 - 1	<24	120	<24	220	1400	<24	120	320	<24	510	370
SCCDLR-9	0.5 - 1	<5	40	<5	10	620	<5	10	66	<5	230	1.8
SCCDLR-10	0.5 - 1	<15	50	<15	550	3300	<15	270	160	<15	320	2.8
SCCDLR-11	0.5 - 1	20	100	<5	140	7800	20	390	210	25	600	0.7
SCCDLR-12	0.5 - 1	<43	120	<22	150	2100	<22	260	140	<22	580	0.6
SCCDLR-13	0.5 - 1	50	50	<24	<24	5500	<24	310	200	<24	230	ND

Note: All Samples Collected by DHS Personnel, Analysis by Southern California Laboratory, Hazardous Materials Unit
ND = Parameter Not Detected NA = Samples Not Analyzed for Given Parameters

File Name: DHSMET.WK1
REVISED 3-23-92

TABLE 4-10 SELECTED PARAMETERS COMPARISON FROM JANUARY 1989 TO JANUARY 1991

MONITOR WELL No. / Date	ELEVATION Feet	METALS Hexavalent Chromium	Total Chromium	Cadmium	Copper	PURGEABLE AROMATICS Benzene	Toluene	Ethyl-benzene	Total Xylenes	PURG. HALOCARBONS Trichloroethene
MW - 1										
Jan-89	96.74	ND	0.014	ND	ND	ND	ND	ND	ND	19
Apr-89	100.45	ND	0.1	ND	ND	ND	ND	ND	3	23
Jul-89	99	ND	0.06	0.01	0.03	ND	ND	ND	ND	13
Oct-89	96.76	ND	ND	ND	ND	ND	ND	ND	ND	12
Jan-90	97.73	ND	ND	ND	ND	ND	ND	ND	ND	16
Apr-90	99.3	ND	0.02	ND	0.02	ND	ND	ND	ND	20
Jul-90	100.83	ND	ND	ND	0.03	ND	ND	ND	ND	18
Oct-90	99.81	ND	ND	ND	0.023	ND	ND	ND	ND	18
Jan-91	99.19	ND	ND	ND	ND	ND	ND	ND	ND	26
MW - 1D										
Oct-90	99.8	ND	0.012	ND	ND	ND	ND	ND	ND	26
Jan-91	99.2	ND	0.025	ND	ND	ND	ND	ND	ND	33
MW - 2										
Jan-89	95.27	0.017	0.022	ND	ND	ND	ND	ND	ND	60
Apr-89	99.36	ND	0.05	ND	ND	ND	ND	ND	ND	45
Jul-89	98.62	ND	0.06	ND	ND	ND	ND	ND	ND	67
Oct-89	95.3	ND	ND	ND	ND	ND	ND	ND	ND	35
Jan-90	96.46	ND	ND	ND	ND	ND	ND	ND	ND	27
Apr-90	98.06	ND	0.02	ND	ND	ND	ND	ND	ND	36
Jul-90	99.6	ND	ND	ND	0.03	ND	ND	ND	ND	30
Oct-90	99.25	ND	ND	ND	ND	ND	ND	ND	ND	24
Jan-91	98.76	ND	0.01	ND	ND	ND	ND	ND	ND	15
MW - 3										
Jan-89	95.02	ND	ND	ND	ND	7.4	17	4900	1500	74
Apr-89	99.29	ND	0.07	ND	ND	ND	ND	1200	60	110
Jul-89	98.21	ND	0.06	ND	ND	ND	ND	ND	ND	120
Oct-89	94.75	ND	ND	ND	ND	ND	ND	1600	150	<100
Jan-90	95.98	ND	ND	ND	ND	ND	ND	110	ND	65
Apr-90	97.72	ND	ND	ND	ND	ND	ND	2100	720	74
Jul-90	99.27	ND	ND	ND	ND	ND	ND	ND	ND	130
Oct-90	97.29	ND	ND	ND	ND	9	2	ND	ND	130
Jan-91	97.69	ND	ND	ND	ND	ND	ND	ND	ND	38
MW - 4										
Jan-89	95.21	33	400	0.028	ND	ND	10	15	29	120
Apr-89	99.19	43	100	0.05	0.02	ND	23	15	50	280
Jul-89	98.19	120	98	0.08	0.06	ND	ND	140	40	290
Oct-89	94.92	110	120	0.07	ND	ND	ND	ND	ND	250
Jan-90	95.87	109	95.1	0.12	ND	ND	ND	ND	ND	220
Apr-90	97.5	82	80.7	0.13	0.02	ND	ND	ND	ND	280
Jul-90	99.2	100	101	0.35	ND	ND	ND	1600	170	320
Oct-90	98.33	58.9	48.4	0.23	0.022	ND	17	230	650	250
Jan-91	97.68	49.4	65.3	0.26	ND	ND	ND	ND	1200	180
MW - 4A										
Jan-89	95.13	0.01	ND	ND	ND	ND	ND	ND	1.3	6.7
Apr-89	98.28	ND	0.05	ND	ND	ND	ND	ND	ND	7
Jul-89	98.3	ND	0.13	ND	ND	ND	ND	ND	ND	5
Oct-89	95.08	ND	ND	ND	ND	ND	ND	ND	ND	3
Jan-90	96.07	ND	ND	ND	ND	ND	ND	ND	ND	8
Apr-90	97.87	ND	ND	ND	ND	ND	ND	ND	ND	2.7
Jul-90	99.43	ND	ND	ND	0.03	ND	ND	ND	ND	6.1
Oct-90	98.41	ND	0.038	ND	ND	ND	ND	ND	ND	ND
Jan-91	97.75	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW - 5										
Jan-89	94.14	ND	ND	ND	ND	0.9	ND	ND	ND	5.9
Apr-89	98.31	ND	0.04	ND	ND	ND	ND	ND	ND	65
Jul-89	97.43	ND	0.04	ND	ND	ND	ND	ND	ND	46
Oct-89	94.19	ND	ND	ND	ND	0.6	ND	ND	ND	15
Jan-90	95.19	ND	0.01	ND	ND	ND	ND	ND	ND	16
Apr-90	97.07	ND	ND	ND	ND	ND	ND	ND	ND	24
Jul-90	98.68	ND	ND	ND	ND	ND	ND	ND	ND	51
Oct-90	97.83	ND	ND	ND	ND	ND	ND	ND	ND	14
Jan-91	96.97	ND	ND	ND	ND	ND	ND	ND	ND	
MW - 6B										
Jan-89	95.12	ND	ND	ND	ND	ND	ND	ND	ND	57
Apr-89	99.11	ND	0.06	ND	ND	ND	ND	ND	ND	37
Jul-89	98.39	ND	0.04	ND	ND	ND	ND	ND	ND	29
Oct-89	95.35	ND	ND	ND	ND	ND	ND	ND	ND	29
Jan-90	96.1	ND	ND	ND	ND	ND	ND	ND	ND	46
Apr-90	97.76	ND	0.02	ND	ND	ND	ND	ND	ND	61
Jul-90	99.28	ND	0.02	ND	ND	ND	ND	ND	ND	51
Oct-90	98.45	ND	0.012	ND	ND	ND	ND	ND	ND	52
Jan-91	97.87	ND	ND	ND	ND	ND	ND	ND	ND	59
MW - 6D										
Oct-90	98.52	ND	ND	ND	0.02	ND	ND	ND	ND	100
Jan-91	97.91	ND	ND	ND	ND	ND	ND	ND	ND	78

TABLE 4-10 SELECTED PARAMETERS COMPARISON FROM JANUARY 1989 TO JANUARY 1991

MONITOR WELL No. / Date	GROUNDWATER ELEVATION Feet	METALS Hexavalent Chromium	Total Chromium	Cadmium	Copper	PURGEABLE AROMATICS Benzene	Toluene	Ethyl-benzene	Total Xylenes	PURG. HALOCARBONS Trichloroethene
MW - 7										
Jan-89	89.47	ND	ND	ND	ND	ND	1.4	1.2	3.6	35
Apr-89	98.83	ND	0.02	ND	ND	ND	ND	ND	1	47
Jul-89	97.9	ND	0.03	ND	ND	ND	ND	ND	ND	25
Oct-89	94.72	ND	ND	ND	ND	ND	ND	ND	ND	44
Jan-90	95.58	ND	ND	ND	ND	ND	ND	ND	ND	39
Apr-90	97.32	ND	ND	ND	ND	ND	ND	ND	ND	46
Jul-90	98.85	ND	ND	ND	ND	ND	ND	ND	ND	34
Oct-90	98.02	ND	ND	ND	ND	ND	ND	ND	ND	19
Jan-91	97.41	ND	ND	ND	ND	ND	ND	ND	ND	1.8
MW - 8										
Jan-89	94.84	ND	ND	ND	ND	ND	ND	ND	1.6	69
Apr-89	99.06	ND	0.06	ND	ND	ND	ND	ND	ND	23
Jul-89	98.13	ND	0.06	ND	0.02	ND	ND	ND	ND	43
Oct-89	94.9	ND	ND	ND	ND	ND	ND	ND	ND	22
Jan-90	95.75	ND	ND	ND	ND	ND	ND	ND	ND	28
Apr-90	97.51	ND	ND	ND	ND	ND	ND	ND	ND	17
Jul-90	99.08	ND	ND	ND	ND	ND	ND	ND	ND	20
Oct-90	98.51	ND	ND	ND	ND	ND	ND	ND	ND	14
Jan-91	97.93	ND	ND	ND	ND	ND	3	1.7	4.4	
MW - 9										
Jan-89	95.55	0.45	0.33	ND	ND	ND	ND	ND	ND	55
Apr-89	99.67	ND	0.06	ND	ND	ND	ND	ND	ND	24
Jul-89	98.77	ND	0.17	ND	0.02	ND	ND	ND	ND	57
Oct-89	95.62	2.5	1.8	ND	ND	ND	ND	ND	ND	110
Jan-90	96.44	2.28	2.2	ND	ND	ND	ND	ND	ND	100
Apr-90	98.26	0.8	0.81	ND	ND	ND	ND	ND	ND	150
Jul-90	99.78	0.03	0.04	ND	ND	ND	ND	ND	ND	64
Oct-90	98.69	0.25	0.19	ND	0.062	ND	ND	ND	ND	17
Jan-91	98.04	0.124	0.085	ND	ND	ND	6.6	1.4	9	26
MW - 10										
Jan-89	95.71	ND	0.029	ND	ND	ND	ND	0.54	ND	32
Apr-89	99.54	ND	0.08	ND	ND	ND	ND	ND	7	23
Jul-89	98.66	ND	0.11	ND	ND	ND	ND	ND	30	180
Oct-89	95.34	ND	ND	ND	ND	ND	ND	190	ND	70
Jan-90	96.38	ND	ND	ND	ND	ND	ND	210	ND	84
Apr-90	98.1	ND	ND	ND	ND	ND	ND	200	ND	93
Jul-90	99.74	ND	ND	ND	ND	ND	200	6500	1500	240
Oct-90	98.62	ND	ND	ND	ND	ND	330	1300	980	ND
Jan-91	97.98	ND	ND	ND	ND	ND	ND	ND	4000	ND
MW - 11										
Jan-89	95.97	ND	ND	ND	ND	ND	ND	43	1.5	34
Apr-89	99.85	ND	0.04	ND	ND	ND	7500	2600	11000	39
Jul-89	98.95	ND	ND	ND	0.13	ND	ND	ND	90	29
Oct-89	95.77	ND	ND	ND	ND	ND	ND	200	ND	35
Jan-90	96.72	ND	ND	ND	ND	ND	ND	83	ND	46
Apr-90	98.44	ND	ND	ND	ND	ND	2.6	370	150	33
Jul-90	100	ND	ND	ND	0.03	ND	440	1000	760	65
Oct-90	98.97	ND	ND	ND	ND	ND	15000	3000	10000	ND
Jan-91	98.29	ND	ND	ND	ND	ND	15000	4700	12000	ND
MW - 12S										
Oct-90	99.28	ND	ND	ND	ND	ND	ND	11	ND	8.6
Jan-91	98.84	ND	ND	ND	ND	ND	ND	4.5	ND	10
MW - 12D										
Oct-90	99.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jan-91	98.7	ND	ND	ND	ND	ND	ND	ND	ND	
MW - 13S										
Oct-90	99.11	ND	ND	ND	ND	ND	ND	ND	ND	2.3
Jan-91	98.5	ND	0.014	ND	ND	ND	ND	ND	ND	7.8
MW - 13D										
Oct-90	99.08	ND	ND	ND	ND	ND	ND	ND	ND	2.6
Jan-91	98.47	ND	ND	ND	ND	ND	ND	ND	ND	1.5
MW - 14S										
Oct-90	98.07	3.2	2.2	0.018	5.3	ND	ND	1750	ND	180
Jan-91	97.38	0.4	0.94	0.007	1	ND	ND	2800	5900	108
MW - 14D										
Oct-90	98.02	ND	ND	ND	ND	ND	ND	ND	ND	1.5
Jan-91	97.41	ND	ND	ND	ND	ND	ND	ND	4	1.6
MW - 15S										
Oct-90	97.71	ND	ND	ND	ND	ND	ND	ND	ND	21
Jan-91	97.1	ND	ND	ND	ND	ND	4	1.6	4	13
MW - 15D										
Oct-90	97.59	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jan-91	96.9	ND	ND	ND	ND	ND	1.3	ND	ND	ND

NOTE: Concentrations reported in mg/l for all metals and ug/l for purgeable aromatics/halocarbons.

TABLE 4-
SOUTHERN CALIFORNIA CHEMICAL
October 1990 Quarterly Monitoring Well Sampling
Halogenated Organic Analytical Results *
(μg/L)

Well Identification	Tetra-chloro-ethene (PCE)	Tri-chloro-ethene (TCE)	1,1-Di-chloro-ethene (1,1-DCE)	trans-1,2-Di-chloro-ethene (t1,2-DCE)	1,1,1-Tri-chloro-ethane (TCA)	1,1-Di-chloro-ethane (1,1-DCA)	1,2-Di-chloro-ethane (1,2-DCA)	Carbon tetra-chloride (CCL4)	Chloroform (CHCL3)	Methylene chloride (CH2CL2)	Ethylene Dibromide (EDB)
SCC-MW01	5.0	18	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW01D	6.3	26	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW02	ND	24	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW03	ND	130	10	ND	ND	ND	ND	150	56	ND	NA
SCC-MW04 **	ND	250	54	ND	ND	80	360	ND	ND	38	0.21
SCC-MW04A **	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW05	ND	14	ND	ND	ND	ND	ND	70	33	ND	NA
SCC-MW06D **	14	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW06B **	10	52	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW07	1.4	19	1.3	3.5	ND	9.0	5.0	ND	ND	ND	NA
SCC-MW08	ND	14	ND	ND	ND	34	14	ND	ND	ND	NA
SCC-MW09	ND	17	4.4	ND	ND	6.5	7.8	ND	ND	ND	NA
SCC-MW10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW12S **	ND	8.6	ND	ND	ND	ND	35	ND	ND	ND	ND
SCC-MW12D **	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW13S	ND	23	ND	ND	ND	1.5	ND	ND	ND	ND	NA
SCC-MW13D	ND	2.6	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW14S	ND	180	28	ND	ND	20	48	ND	ND	40	ND
SCC-MW14D	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW15S **	ND	21	ND	ND	ND	ND	16	ND	ND	ND	NA
SCC-MW15D **	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MCL	5	5	6	--	200	--	0.5	0.5	--	--	0.02
SFS GW	ND - 1.4	ND - 2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND

* = Results reported in this table are for those parameters detected above analytical method EPA 8010-L detection limits in at least one well. The parameters analyzed for by method 8010-L and typical detection limits are listed in Appendix A.

** = Samples analyzed for Appendix IX parameters, using method EPA 8240-L & AB 1803.

ND = Analytical parameter not detected.
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in wells tested in Santa Fe Springs during the year 1989.

TABLE 4-12
SOUTHERN CALIFORNIA CHEMICAL
January 1991 Quarterly Monitoring Well Sampling
Halogenated Organic Analytical Results
(μg/L)

Well Identification	Tetra-chloro-ethene (PCE)	Tri-chloro-ethene (TCE)	1,1-Di-chloro-ethene (1,1-DCE)	1,1-Di-chloro-ethane (1,1-DCA)	1,2-Di-chloro-ethane (1,2-DCA)	1,1,2,2-Tri-chloro-ethane (1,2-TCA)	Carbon tetra-chloride (CCL4)	Chloroform (CHCL3)	Methylene chloride (CH2CL2)
SCC-MW01S	6.8	26.0	ND	ND	1.0	ND	ND	ND	ND
SCC-MW01D	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW02	ND	15.0	ND	ND	ND	ND	ND	ND	ND
SCC-MW03	ND	38.0	ND	ND	26.0	ND	74.0	ND	ND
SCC-MW04	ND	180.0	ND	57.0	190.0	ND	ND	ND	ND
SCC-MW04A	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW05	ND	22.0	ND	ND	ND	ND	140.0	49.0	ND
SCC-MW06B	13.0	59.0	ND	ND	ND	ND	ND	ND	ND
SCC-MW06D	20.0	78.0	ND	ND	ND	ND	ND	ND	ND
SCC-MW07	ND	1.8	3.0	20.0	ND	ND	ND	ND	ND
SCC-MW08	ND	26.0	6.0	59.0	30.0	ND	ND	ND	ND
SCC-MW09	ND	26.0	7.0	14.0	30.0	ND	ND	ND	ND
SCC-MW1O	ND	ND	ND	ND	220.0	ND	ND	ND	ND
SCC-MW11	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW12S	ND	10	ND	ND	27.0	ND	ND	ND	ND
SCC-MW12D	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW13S	ND	7.8	ND	1.6	ND	3.0	ND	ND	ND
SCC-MW13D	ND	1.5	ND	ND	ND	ND	ND	ND	ND
SCC-MW14S	ND	108.0	15.0	13.0	38.0	ND	ND	ND	13.0
SCC-MW14D	ND	1.6	ND	ND	ND	ND	ND	ND	ND
SCC-MW15S	ND	13.0	1.0	ND	9.6	ND	ND	ND	ND
SCC-MW15D	ND	ND	ND	ND	ND	ND	ND	ND	ND
MCL	5.0	5.0	6.0	--	0.5	1.0	0.5	--	--
SFS GW	ND - 1.4	ND - 2.8	ND	ND	ND	ND	ND	ND	ND

ND = Analytical parameter not detected.
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs during the year 1989.

TABLE 4-13
SOUTHERN CALIFORNIA CHEMICAL
October 1990 Quarterly Monitoring Well Sampling
Purgeable Aromatic Analytical Results *
(μg/L)

Well Identification	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)
SCC-MW01	ND	ND	ND	ND
SCC-MW01D	ND	ND	ND	ND
SCC-MW02	ND	ND	ND	ND
SCC-MW03	9.0	ND	2.0	ND
SCC-MW04 **	ND	230	17	650
SCC-MW04A **	ND	ND	ND	ND
SCC-MW05	ND	ND	ND	ND
SCC-MW06D **	ND	ND	ND	ND
SCC-MW06B **	ND	ND	ND	ND
SCC-MW07	ND	ND	ND	ND
SCC-MW08	ND	ND	ND	ND
SCC-MW09	ND	ND	ND	ND
SCC-MW10	ND	1330	330	980
SCC-MW11	ND	3000	15000	10000
SCC-MW12S **	ND	11	ND	ND
SCC-MW12D **	ND	ND	ND	ND
SCC-MW13S	ND	ND	ND	ND
SCC-MW13D	ND	ND	ND	ND
SCC-MW14S	ND	1750	ND	ND
SCC-MW14D	ND	ND	ND	ND
SCC-MW15S **	ND	ND	ND	ND
SCC-MW15D **	ND	ND	ND	ND
MCL	0.1	680	--	1750
SFS GW	ND	ND	ND	ND

* = Results reported in this table are for those parameters detected above analytical method EPA 8020-L detection limits in at least one well. The parameters analyzed for by method 8020-L and typical detection limits are listed in Appendix A.

** = Samples analyzed for Appendix IX parameters, using method EPA 8240-L.

ND = Analytical parameter not detected.
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in wells tested in Santa Fe Springs during the year 1989.

TABLE 4-14
SOUTHERN CALIFORNIA CHEMICAL
January 1991 Quarterly Monitoring Well Sampling
Purgeable Aromatic Analytical Results
(μg/L)

Well Identification	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)
SCC-MW01	ND	ND	ND	ND
SCC-MW01D	ND	ND	ND	ND
SCC-MW02	ND	ND	ND	ND
SCC-MW03	ND	ND	ND	ND
SCC-MW04	ND	ND	ND	1.0
SCC-MW04A	ND	ND	ND	ND
SCC-MW05	ND	ND	ND	ND
SCC-MW06B	ND	ND	ND	ND
SCC-MW06D	ND	ND	ND	ND
SCC-MW07	ND	ND	ND	ND
SCC-MW08	ND	1.7	3.0	4.4
SCC-MW09	ND	1.4	6.6	9.0
SCC-MW10	ND	ND	ND	4.0
SCC-MW11	ND	4.0	15.0	12.0
SCC-MW12S	ND	4.5	ND	ND
SCC-MW12D	ND	ND	ND	ND
SCC-MW13S	ND	ND	ND	ND
SCC-MW13D	ND	ND	ND	ND
SCC-MW14S	ND	2.0	ND	590
SCC-MW14D	ND	ND	ND	4.0
SCC-MW15S	ND	1.6	4.0	4.0
SCC-MW15D	ND	ND	1.3	ND
MCL	0.1	680	--	1750
SFS GW	ND	ND	ND	ND

ND = Analytical parameter not detected.
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs during the year 1989.

TABLE 4-15
SOUTHERN CALIFORNIA CHEMICAL
October 1990 Quarterly Monitoring Well Sampling
Inorganic Analytical Results *
(mg/L)

Well Identification	Barium	Cadmium	Chromium (hexavalent	Chromium (total)	Copper	Iron	Nickel	Zinc	Chloride	Nitrates (Nitrogen)	Cyanide (total)
	EPA-6010-L	EPA-6010-L	EPA-7196	EPA-6010-L	EPA-6010-L	EPA-6010-L	EPA-6010-L	EPA-6010-L	EPA-300	EPA-300	EPA-9012
SCC-MW01	NA	ND	ND	ND	0.023	ND	ND	0.023	650	0.33	NA
SCC-MW01D	NA	ND	ND	0.012	ND	2.3	ND	0.044	104	6.3	NA
SCC-MW02	NA	ND	ND	ND	ND	ND	ND	0.055	199	7.3	NA
SCC-MW03	NA	ND	ND	ND	ND	5.3	ND	ND	636	4.1	NA
SCC-MW04**	0.049	0.23	58.9	48.4	0.022	ND	ND	0.051	871	0.29	ND
SCC-MW04A**	0.033	ND	ND	0.038	ND	ND	ND	0.70	142	5.6	ND
SCC-MW05	NA	ND	ND	ND	ND	ND	ND	0.20	182	8.7	NA
SCC-MW06D**	0.031	ND	ND	ND	0.02	ND	ND	0.078	145	9.8	ND
SCC-MW06B**	0.033	ND	ND	0.012	ND	ND	ND	0.058	98.4	10	ND
SCC-MW07	NA	ND	ND	ND	ND	0.18	ND	0.19	629	4.3	NA
SCC-MW08	NA	ND	ND	ND	ND	ND	ND	0.028	346	4.9	NA
SCC-MW09	NA	ND	0.25	0.19	0.062	ND	ND	0.12	280	3.5	NA
SCC-MW10	NA	ND	ND	ND	ND	0.79	ND	0.080	369	0.21	NA
SCC-MW11	NA	ND	ND	ND	ND	0.18	ND	0.17	161	3.1	NA
SCC-MW12S**	0.071	ND	ND	ND	ND	ND	ND	ND	201	6.1	ND
SCC-MW12D**	0.049	ND	ND	ND	ND	ND	ND	0.028	196	5.5	ND
SCC-MW13S	NA	ND	ND	ND	ND	ND	ND	0.040	217	0.26	NA
SCC-MW13D	NA	ND	ND	ND	ND	ND	ND	0.091	180	6.0	NA
SCC-MW14S	NA	0.018	3.2	2.2	5.3	ND	0.82	1.4	950	5.1	NA
SCC-MW14D	NA	ND	ND	ND	ND	ND	ND	0.056	273	7.3	NA
SCC-MW15S**	0.062	ND	ND	ND	ND	ND	ND	0.049	209	ND	0.017
SCC-MW15D**	0.036	ND	ND	ND	ND	ND	ND	0.041	97.2	7.8	ND
MCL	1.0	0.01	--	0.05	1	0.3	0.1***	5	250	10	0.2***
SFS GW	< 0.1	< 0.001	--	< 0.01	<0.02-0.05	<0.06-0.18	--	<0.02-0.06	<1.3-83.2	0.5-9.9	--

* = Results reported in this table are for those parameters detected above analytical method detection limits in at least one well. The parameters analyzed for by each method and typical detection limits are listed in Appendix A.
** = Samples analyzed for Appendix IX parameters.
*** = Proposed MCL value

ND = Analytical parameter not detected.
NA = Parameter not analyzed
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in wells tested in Santa Fe Springs in the year 1989.

TABLE 4-16
SOUTHERN CALIFORNIA CHEMICAL
January 1991 Quarterly Monitoring Well Sampling
Inorganic Analytical Results
(mg/L)

Well Identification	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Zinc EPA-6010-L	Chloride EPA-300	Nitrates (Nitrogen) EPA-300
SCC-MW01	ND	ND	ND	ND	ND	ND	0.051	606	5.7
SCC-MW01D	ND	ND	0.025	ND	ND	ND	ND	85.6	5.1
SCC-MW02	ND	ND	0.01	ND	0.67	ND	ND	138	5.7
SCC-MW03	ND	ND	ND	ND	0.18	ND	ND	104	ND
SCC-MW04	0.26	49.4	65.3	ND	ND	ND	0.098	812	ND
SCC-MW04A	ND	ND	ND	ND	ND	ND	ND	127	6.2
SCC-MW05	ND	ND	ND	ND	0.35	ND	2.7	74.8	7.4
SCC-MW06B	ND	ND	ND	ND	0.19	ND	0.024	67.3	9.3
SCC-MW06D	ND	ND	ND	ND	0.13	ND	0.022	75.8	8.9
SCC-MW07	ND	ND	ND	ND	0.22	ND	0.094	629	4.3
SCC-MW08	ND	ND	ND	ND	ND	ND	0.78	212	3.4
SCC-MW09	ND	0.124	0.085	ND	0.17	ND	0.46	174	5.5
SCC-MW10	ND	ND	ND	ND	0.87	ND	0.15	183	ND
SCC-MW11	ND	ND	ND	ND	0.16	ND	0.069	115	0.89
SCC-MW12S	ND	ND	ND	ND	ND	ND	ND	118	5.5
SCC-MW12D	ND	ND	ND	ND	ND	ND	ND	134	5.2
SCC-MW13S	ND	ND	0.014	ND	ND	ND	ND	142	5.0
SCC-MW13D	ND	ND	ND	ND	ND	ND	0.61	140	5.0
SCC-MW14S	0.007	0.4	0.94	1.0	ND	0.26	0.38	698	2.1
SCC-MW14D	ND	ND	ND	ND	0.34	ND	0.022	128	6.7
SCC-MW15S	ND	ND	ND	ND	ND	ND	0.046	133	ND
SCC-MW15D	ND	ND	ND	ND	ND	ND	1.8	94.4	7.7
MCL	0.01	--	0.05	1.0	0.3	0.1*	5.0	250	10
SFS GW	< 0.001	--	< 0.01	<0.02-0.05	<0.06-0.18	--	<0.02-0.06	24.3-83.2	0.5-9.9

ND = Analytical parameter not detected.
NA = Parameter not analyzed
MW = Monitor Well
* Proposed MCL value

MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs in the year 1989.

TABLE 4-17
SOUTHERN CALIFORNIA CHEMICAL
January 1991 Quarterly Monitoring Well Sampling
RCRA Indicator Results (Quadruplicate Analyses)

Well Identification	EC (umhos/cm)	pH (lab units)	TOC (mg/l)	TOX (ug/l)
SCC-MW01S	2,440	7.0	11.1	0.088
SCC-MW01S (DUPLICATE)	2,510	6.9	12.1	0.086
SCC-MW01S (TRIPLICATE)	2,470	7.0	13.3	0.076
SCC-MW01S (QUADRUPLICATE)	2,350	7.1	12.9	0.073
SCC-MW01D	1,280	7.6	2.3	0.063
SCC-MW01D (DUPLICATE)	1,320	7.5	1.5	0.063
SCC-MW01D (TRIPLICATE)	1,290	7.5	1.9	0.060
SCC-MW01D (QUADRUPLICATE)	1,300	7.5	2.4	0.061
SCC-MW02	1,620	7.4	2.6	0.040
SCC-MW02 (DUPLICATE)	1,560	7.4	1.7	0.052
SCC-MW02 (TRIPLICATE)	1,640	7.4	1.3	0.035
SCC-MW02 (QUADRUPLICATE)	1,600	7.4	1.9	0.043
SCC-MW03	1,460	7.3	14.4	0.14
SCC-MW03 (DUPLICATE)	1,440	7.3	13.6	0.14
SCC-MW03 (TRIPLICATE)	1,410	7.3	12.2	0.14
SCC-MW03 (QUADRUPLICATE)	1,410	7.2	12.0	0.15
SCC-MW04	4,250	6.8	182	1.2
SCC-MW04 (DUPLICATE)	4,250	6.8	173	1.2
SCC-MW04 (TRIPLICATE)	4,210	6.8	174	1.3
SCC-MW04 (QUADRUPLICATE)	4,140	6.8	171	1.3
SCC-MW04A	1,590	7.5	2.1	0.026
SCC-MW04A (DUPLICATE)	1,590	7.5	2.1	0.027
SCC-MW04A (TRIPLICATE)	1,600	7.5	2.3	0.027
SCC-MW04A (QUADRUPLICATE)	1,570	7.5	2.3	0.026
SCC-MW05	1,300	7.2	3.5	0.16
SCC-MW05 (DUPLICATE)	1,300	7.2	3.6	0.18
SCC-MW05 (TRIPLICATE)	1,280	7.2	3.9	0.18
SCC-MW05 (QUADRUPLICATE)	1,300	7.2	3.8	0.20
SCC-MW06B	1,340	7.3	1.9	0.068
SCC-MW06B (DUPLICATE)	1,340	7.3	2.2	0.067
SCC-MW06B (TRIPLICATE)	1,340	7.3	2.6	0.052
SCC-MW06B (QUADRUPLICATE)	1,340	7.3	2.9	0.081
SCC-MW06D	1,410	7.4	3.2	0.14
SCC-MW06D (DUPLICATE)	1,410	7.4	3.4	0.095
SCC-MW06D (TRIPLICATE)	1,390	7.4	2.4	0.10
SCC-MW06D (QUADRUPLICATE)	1,400	7.4	2.0	0.092
SCC-MW07	2,990	7.4	4.5	0.097
SCC-MW07 (DUPLICATE)	2,930	7.4	4.6	0.078

ND = Analytical parameter not detected.
NA = Parameter not analyzed
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs in the year 1989.
EC = Electrical Conductivity
TOC = Total Organic Carbon
TOX = Total Organic Halides

TABLE 4-17
SOUTHERN CALIFORNIA CHEMICAL
January 1991 Quarterly Monitoring Well Sampling
RCRA Indicator Results (Quadruplicate Analyses)

Well Identification	EC (umhos/cm)	pH (lab units)	TOC (mg/l)	TOX (ug/l)
SCC-MW07 (TRIPLICATE)	2,950	7.4	3.9	0.073
SCC-MW07 (QUADRUPLICATE)	2,920	7.4	4.5	0.10
SCC-MW08	1,990	7.2	14.9	0.20
SCC-MW08 (DUPLICATE)	1,970	7.2	13.7	0.20
SCC-MW08 (TRIPLICATE)	1,950	7.2	14.4	0.20
SCC-MW08 (QUADRUPLICATE)	2,100	7.1	15.1	0.20
SCC-MW09	1,730	7.2	26.8	0.20
SCC-MW09 (DUPLICATE)	1,760	7.1	27.0	0.20
SCC-MW09 (TRIPLICATE)	1,720	7.1	24.2	0.20
SCC-MW09 (QUADRUPLICATE)	1,720	7.2	27.4	0.19
SCC-MW10	1,890	7.3	196	0.40
SCC-MW10 (DUPLICATE)	1,910	7.3	190	0.42
SCC-MW10 (TRIPLICATE)	1,920	7.3	190	0.42
SCC-MW10 (QUADRUPLICATE)	1,900	7.3	188	0.40
SCC-MW11	1,530	7.5	68.4	0.13
SCC-MW11 (DUPLICATE)	1,500	7.5	66.5	0.13
SCC-MW11 (TRIPLICATE)	1,530	7.5	64.3	0.14
SCC-MW11 (QUADRUPLICATE)	1,520	7.5	63.2	0.14
SCC-MW12S	1,600	7.4	11.3	0.063
SCC-MW12S (DUPLICATE)	1,630	7.4	11.8	0.062
SCC-MW12S (TRIPLICATE)	1,610	7.4	11.4	0.067
SCC-MW12S (QUADRUPLICATE)	1,570	7.4	10.8	0.13
SCC-MW12D	1,690	7.5	2.2	0.024
SCC-MW12D (DUPLICATE)	1,720	7.4	2.3	0.022
SCC-MW12D (TRIPLICATE)	1,680	7.4	2.2	0.023
SCC-MW12D (QUADRUPLICATE)	1,720	7.5	2.4	0.022
SCC-MW13S	1,640	7.4	2.1	0.083
SCC-MW13S (DUPLICATE)	1,650	7.4	3.7	0.095
SCC-MW13S (TRIPLICATE)	1,640	7.4	3.6	0.073
SCC-MW13S (QUADRUPLICATE)	1,600	7.4	3.6	0.075
SCC-MW13D	1,690	7.6	2.1	0.031
SCC-MW13D (DUPLICATE)	1,680	7.5	2.2	0.026
SCC-MW13D (TRIPLICATE)	1,620	7.5	2.3	0.023
SCC-MW13D (QUADRUPLICATE)	1,670	7.5	2.2	0.026
SCC-MW14S	2,960	7.0	87.2	0.41
SCC-MW14S (DUPLICATE)	2,930	7.0	80.6	0.49
SCC-MW14S (TRIPLICATE)	2,940	7.0	80.0	0.22
SCC-MW14S (QUADRUPLICATE)	2,950	7.0	83.4	0.49

ND = Analytical parameter not detected.
NA = Parameter not analyzed
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs in the year 1989.
EC = Electrical Conductivity
TOC = Total Organic Carbon
TOX = Total Organic Halides

TABLE 4-17
SOUTHERN CALIFORNIA CHEMICAL
January 1991 Quarterly Monitoring Well Sampling
RCRA Indicator Results (Quadruplicate Analyses)

Well Identification	EC (umhos/cm)	pH (lab units)	TOC (mg/l)	TOX (ug/l)
SCC-MW14D	1,640	7.4	2.6	0.028
SCC-MW14D (DUPLICATE)	1,640	7.4	2.5	0.026
SCC-MW14D (TRIPLICATE)	1,670	7.4	2.6	0.026
SCC-MW14D (QUADRUPLICATE)	1,670	7.4	2.5	0.020
SCC-MW15S	1,390	7.1	26.1	0.082
SCC-MW15S (DUPLICATE)	1,420	7.1	24.6	0.069
SCC-MW15S (TRIPLICATE)	1,380	7.1	24.6	0.059
SCC-MW15S (QUADRUPLICATE)	1,420	7.1	24.6	0.071
SCC-MW15D	1,490	7.5	1.7	0.028
SCC-MW15D (DUPLICATE)	1,510	7.5	1.7	0.029
SCC-MW15D (TRIPLICATE)	1,520	7.5	2.1	0.022
SCC-MW15D (QUADRUPLICATE)	1,510	7.5	2.6	0.022
MCL	--	--	--	--
SFS GW	640-1150	7.82-7.95	--	--

ND = Analytical parameter not detected.
NA = Parameter not analyzed
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs in the year 1989.
EC = Electrical Conductivity
TOC = Total Organic Carbon
TOX = Total Organic Halides

TABLE 4-18
SOUTHERN CALIFORNIA CHEMICAL
AQUIFER TEST PARAMETERS
Analyzed by GWAP

Well No.	Distance From Pumping Well (ft.)	Well Screen Interval (ft. bgs)	Transmissivity (gpd/ft.)		Hydraulic Conductivity (gpd/sq.ft.)		Storativity	
			Drawdown	Recovery	Drawdown	Recovery	Drawdown	Recovery
MW-3	88	45-75	79,080	92,910	1,977	2,323	1.14E-02	3.54E-03
MW-4	10	45-75	16,150	13,430	404	336	1.54E-02	1.58E-02
MW-4A	7	87-107	41,500	37,850	1,038	0,946	7.90E-02	5.72E-02
MW-8	81	41-71	64,280	67,300	1,607	1,683	9.79E-03	7.60E-03
MW-9	91	47-77	68,870	64,280	1,722	1,607	7.41E-03	1.02E-02
MW-10	68	45-75	59,990	67,300	1,500	1,683	1.03E-02	7.81E-03
MW-14S	88	51-71	77,280	73,800	1,932	1,845	1.23E-02	1.20E-02
MW-14D	92	88-103	99,550	106,700	2,489	2,668	6.17E-03	3.47E-03

lotes: constant discharge rate was 50 gpm
aquifer thickness was assumed to be 40 ft.

TABLE 4-19
SOUTHERN CALIFORNIA CHEMICAL
AQUIFER TEST PARAMETERS
Analyzed by AQTESOLV (with partial penetration)

Well No.	Distance From Pumping Well (ft.)	Well Screen Interval (ft. bgs)	Transmissivity (gpd/ft.)		Hydraulic Conductivity (gpd/sq.ft.)		Storativity	
			Drawdown	Recovery	Drawdown	Recovery	Drawdown	Recovery
MW-3	88	45-75	82,944	105,182	2,074	2,630	1.13E-02	2.41E-03
MW-4	10	45-75	16,498	17,983	412	450	9.98E-03	8.07E-03
MW-4A	7	87-107	45,268	47,165	1,132	1,179	1.14E-01	7.95E-02
MW-8	81	41-71	71,161	81,082	1,779	2,027	8.09E-03	5.51E-03
MW-9	91	47-77	66,402	77,341	1,660	1,934	7.89E-03	7.84E-03
MW-10	68	45-75	63,390	71,774	1,585	1,794	1.02E-02	6.50E-03
MW-14S	88	51-71	81,419	86,934	2,035	2,173	1.01E-02	8.64E-03
MW-14D	92	88-103	92,108	101,109	2,303	2,528	6.96E-03	4.04E-03

otes: constant discharge rate was 50 gpm
aquifer thickness was assumed to be 40 ft.

TABLE 4-20
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Investigation Aquifer Test Sampling
Groundwater Analytical Results
(mg/L)

SAMPLE IDENTIFICATION	ARSENIC EPA-7060	CYANIDE (TOTAL) EPA-9010	CADMIUM EPA-6010	CHROMIUM (HEXVALENT) EPA-7196	CHROMIUM (TOTAL) EPA-6010	COPPER EPA-6010	IRON EPA-6010	NICKEL EPA-6010	AMMONIA (NITROGEN) EPA-350.3	NITRATE (NITROGEN) EPA-300.0	SULFIDE AS SULFER EPA-376.2	CHLORIDE EPA-325.2
SCC-PT1-WELL	0.008	ND	0.12	13.4	10.4	ND	ND	ND	63.8	1.9	0.36	461
SCC-PT2-FILTER	0.007	0.035	ND	3.1	3	0.031	ND	0.043	36.5	0.23	ND	572
SCC-PT3-FILTER-C2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCC-PT4-WELL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCC-PT5-WELL	0.006	ND	0.058	7.2	7.9	ND	ND	ND	63.8	3.8	0.34	342
SCC-PT6-FILTER-C	ND	ND	0.041	6.4	6.5	ND	ND	ND	50.2	3.9	0.19	368
SCC-PT7-RW-POND	ND	ND	0.0061	6.4	5.7	0.37	0.1	0.1	140	0.2	0.18	620
TRAVEL BLANK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE IDENTIFICATION	METHYLENE CHLORIDE EPA-601	1,1-DICHLO-ETHANE EPA-601	1,1-DICHLO-ETHENE EPA-601	1,2-DICHLO-ETHANE EPA-601	TRI-CHLORO-ETHENE EPA-601	ETHYL-BENZENE EPA-602	TOLUENE EPA-602	XYLENES, (TOTAL) EPA-602	BASE NEUTRAL ACID EPA-625	OIL & GREASE EPA-413.1	TOTAL SUSPENDED SOLIDS EPA-160.2	
SCC-PT1-WELL	0.069	ND	ND	0.06	0.022	0.34	0.037	0.14	NA	7.8	15	
SCC-PT2-FILTER	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.5	11	
SCC-PT3-FILTER-C2	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	
SCC-PT4-WELL	0.0054	0.0063	ND	0.032	0.014	ND	ND	ND	NA	NA	NA	
SCC-PT5-WELL	0.0051	0.013	0.009	0.038	0.055	0.59	0.029	0.32	NA	8.6	14	
SCC-PT6-FILTER-C	0.001	ND	ND	ND	ND	ND	ND	ND	NA	8.0	ND	
SCC-PT7-RW-POND	0.0014	ND	ND	ND	ND	0.011	ND	0.0051	ND	10.9	22	
TRAVEL BLANK	0.0017	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	

NOTE: PT1 & PT2 were collected at the beginning of the test. PT3 & PT4 were collected at the middle of the test from one canister. FILE NAME: PUMPTST1.WK1

PT5 & PT6 were collected at the end of the test from one canister. PT7 was collected from the pond at the end of the test.

Phase II RFI

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
DRYING POND AREA										
WMU46-SB1	10	0.38	ND	44	890	26,000	900	11	100	5.4
	15	0.23	ND	11	5.8	8400	190	2.2	28	6.0
	20	ND	ND	41	300	13,000	450	3.7	59	3.8
	25	0.17	ND	35	190	23,000	610	8.1	150	3.8
WMU46-SB2	3	ND	ND	39	500	36,000	310	18	1,100	7.1
	6	6.1	ND	42	230	27,000	200	13	170	7.5
	10	ND	ND	48	56	36,000	34	20	99	8.3
	15	ND	ND	6.3	8.6	5,600	5.3	2.5	15	8.1
	20	ND	ND	10	10	8,000	7.2	4.2	20	7.1
	25	ND	ND	9.8	11	8,300	7.1	3.9	20	6.5
	30	ND	ND	17	15	11,000	9.8	5.4	26	6.8
	35	ND	ND	48	42	31,000	31	14	96	7.5
	40	ND	ND	37	45	35,000	30	15	91	8.0
WMU46-SB3	10	0.49	ND	55	2600	37,000	1400	14	240	3.8
	14	0.32	ND	10	500	7200	95	2.3	56	4.2
WMU46-HB1	1-2	ND	ND	37	39	22,000	31	13	57	7.1
	5-6	0.43	ND	55	1000	36,000	360	17	220	4.8
	9-10	ND	ND	72	410	4600	150	21	120	5.7
WMU46-HB2	1-2	0.28	ND	44	130	23,000	290	11	80	7.0
	5-6	0.32	ND	61	54	35,000	190	18	78	7.0
	9-10	ND	ND	17	18	10,000	150	5.6	29	6.8

Shaded box indicates that value is greater than one order of magnitude above background concentration
ND = Parameter Not Detected NA = Parameter Not Analyzed

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
Metals and pH Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Iron EPA-6010-L	Nickel EPA-6010-L	Lead EPA-6010-L	Zinc EPA-6010-L	pH EPA-150.1
WASTE ACID TANK AREA										
WMU12-SB1	3	0.47	ND	88	25	22,000	18	13	140	5.9
	5	0.26	ND	40	23	23,000	21	9.9	66	7.2
	10	0.54	ND	71	72	40,000	50	20	100	6.9
	15	ND	ND	32	27	19,000	17	8.9	57	7.3
	20	1.6	ND	11	7.1	7900	7.5	2.5	23	7.5
	30	0.19	ND	34	31	24,000	23	9.4	66	6.9
	40	ND	ND	51	62	34,000	35	23	92	6.9
WMU12-SB2	3	1.8	ND	450	37	1600	17	68	190	8.9
	5	0.14	ND	94	22	22,000	20	9.4	56	7.9
	10	ND	ND	35	27	22,000	22	9.9	57	8.0
	15	ND	ND	30	21	20,000	16	8.2	50	7.5
	20	ND	ND	16	8.5	14,000	7.4	4.4	34	7.8
	30	ND	ND	11	3.5	9300	4.5	2.5	21	7.3
	40	ND	ND	41	35	25,000	29	9.7	76	6.5
PARKING AREA WEST OF LAB										
WPL-HB1	1-2	0.20	ND	45	31	27,000	24	14	62	8.2
	5-6	0.16	ND	45	33	26,000	25	13	57	6.8
	9-10	ND	ND	28	25	19,000	17	8.3	49	6.9
WPL-HB2	1-2	0.39	ND	62	46	29,000	27	25	78	6.5
	5-6	0.45	ND	55	53	26,000	25	26	72	5.9
	9-10	ND	ND	27	22	19,000	17	7.9	46	6.9

Shaded box indicates that value is greater than one order of magnitude above background concentration

ND = Parameter Not Detected

NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
Purgeable Halocarbons Analytical Results
(mg/kg)

Boring	Depth (Feet)	Tri-chloro-ethene (TCE)	Tetra-chloro-ethene (PCE)	1,1-Di-chloro-ethene (1,1-DCE)	1,1-Di-chloro-ethane (1,1-DCA)	Trans 1,2-Di-chloro-ethene (T1,2-DCE)	1,1,1-Tri-chloro-ethane (1,1,1-TCA)	Chloroform (CHCL3)	Methylene chloride (CH2CL2)	1,2-Di-chloro-ethane (1,2-DCA)	Cis 1,2-Di-chloro-ethene (C1,2-DCE)
UST AREA											
UST-SB14	10	ND	ND	ND	ND	ND	ND	ND	ND	0.1500	ND
	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
UST-SB15	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
UST-SB18	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DRYING POND AREA											
WMU46-SB2	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WMU46-SB3	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WASTE ACID TANK AREA											
WMU12-SB1	3	ND	ND	0.0070	0.0160	ND	0.0510	ND	ND	ND	ND
	5	ND	ND	0.0030	0.0190	ND	0.0180	ND	ND	ND	ND
	10	ND	ND	0.0054	0.0550	ND	0.0290	ND	ND	ND	0.0035
	15	ND	ND	0.0170	0.1600	ND	0.0910	0.0200	ND	ND	0.0090
	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	30	0.0370	ND	0.0085	0.0790	ND	0.0036	0.0029	0.0057	ND	0.0031
	40	0.2000	ND	0.0370	0.5800	0.0026	0.0036	0.0150	0.2100	0.0055	0.0110

*Analyses by EPA 8010, all others by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
Purgeable Halocarbons Analytical Results
(mg/kg)

Boring	Depth (Feet)	Tri-chloro-ethene (TCE)	Tetra-chloro-ethene (PCE)	1,1-Di-chloro-ethene (1,1-DCE)	1,1-Di-chloro-ethane (1,1-DCA)	Trans 1,2-Di-chloro-ethene (T1,2-DCE)	1,1,1-Tri-chloro-ethane (1,1,1-TCA)	Chloroform (CHCL3)	Methylene chloride (CH2CL2)	1,2-Di-chloro-ethane (1,2-DCA)	Cis 1,2-Di-chloro-ethene (C1,2-DCE)
WASTE ACID TANK AREA											
WMU12-SB2	3	0.0550	ND	ND	0.0170	ND	ND	ND	ND	ND	ND
	5	0.0360	ND	ND	0.0250	ND	ND	ND	ND	ND	ND
	10	0.0330	ND	ND	0.0240	ND	0.0110	0.0034	ND	ND	ND
	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	40	0.0960	ND	0.0200	0.1010	0.0015	0.0170	0.0200	0.0670	0.0043	0.0058
WMU20 AREA											
WMU20-HB1	1-2	ND	10.0	ND	ND	ND	ND	ND	ND	ND	ND
	5-6	ND	0.2060	ND	ND	ND	ND	ND	ND	ND	ND
WMU20-HB2	1-2	ND	0.0064	ND	ND	ND	ND	ND	ND	ND	ND
	5-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Analyses by EPA 8010, all others by EPA 8240
ND = Parameter Not Detected
NA = Parameter Not Analyzed

TABLE 4-4
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	TPH (Extractable) EPA-8015M
UST AREA						
UST-SB12	10	ND	ND	ND	ND	ND
	15	ND	ND	ND	ND	ND
	20	ND	ND	ND	ND	ND
	25	ND	ND	ND	ND	ND
	30	ND	ND	ND	ND	ND
	35	ND	ND	ND	ND	ND
UST-SB13	10	ND	ND	ND	ND	ND
	15	ND	ND	ND	ND	ND
	20	ND	ND	ND	ND	ND
	25	ND	ND	ND	ND	ND
UST-SB14	10	ND	ND	ND	ND	9000*
	15	ND	ND	ND	ND	2900
	20	ND	ND	ND	ND	ND
	25	ND	ND	ND	ND	ND
	30	ND	ND	ND	ND	ND
UST-SB15	5	ND	0.28	ND	2.30	810
	10	ND	0.014	ND	0.011	960
	15	ND	1.10	ND	5.70	3600
	20	ND	0.56	ND	1.90	3500
	25	ND	0.25	ND	1.10	480
	30	ND	0.017	ND	0.040	ND
	35	ND	0.008	ND	0.050	ND
UST-SB16	5	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND
	15	0.006	0.15	0.013	0.84	770
	20	0.010	0.16	0.018	1.8	1600
	25	ND	0.006	ND	0.049	80
	30	ND	ND	ND	ND	ND
	35	ND	ND	ND	ND	ND
UST-SB17	5	ND	ND	ND	ND	29
	10	ND	ND	ND	ND	ND
	15	ND	0.66	1.8	7.0	4300
	20	ND	0.54	1.9	6.9	4400
	25	ND	0.089	ND	0.26	300
	30	ND	ND	ND	ND	ND
	35	ND	ND	ND	ND	ND
UST-SB18	5	0.010	0.13	0.055	2.3	1900
	10	ND	0.047	0.19	0.16	3000*
	15	ND	0.28	ND	0.52	850
	20	ND	0.61	0.017	1.1	2700
	25	ND	0.64	0.26	1.9	5100
	30	ND	ND	ND	ND	57
	35	ND	ND	ND	ND	41

*Carbon chain distribution: C8 to C44

Benzene, Ethylbenzene, Toluene, Xylenes (Total) analyses by EPA 8020.

ND = Parameter Not Detected

NA = Parameter Not Analyzed

TABLE 4-4
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
Purgeable Aromatic and UST Investigation Analytical Results
(mg/kg unless otherwise noted)

Soil Borings	Depth (Feet)	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	TPH (Extractable) EPA-8015M
DRYING POND AREA						
WMU46-SB2	3	ND	0.005	ND	0.010	44
	6	ND	0.077	0.010	0.14	470
	10	ND	0.75	0.043	1.4	2600
	15	ND	1.6	0.017	2.9	2100
	20	0.005	2.0	0.23	4.2	3500
	25	ND	2.0	0.24	4.4	3200
	30	ND	2.5	0.11	6.6	7700
	35	ND	0.069	0.012	0.99	1400
	40	ND	0.034	ND	0.52	470
WMU46-SB3	10	ND	5.10	ND	14.0	3400
	14	ND	0.99	ND	3.0	1200

TABLE 4–5
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
PCB's Analytical Results
(mg/kg)

Soil Boring	Depth (Feet)	Aroclor 1260 EPA-8080	Aroclor 1254 EPA-8080	Aroclor 1248 EPA-8080	Aroclor 1242 EPA-8080	Aroclor 1232 EPA-8080	Aroclor 1221 EPA-8080	Aroclor 1016 EPA-8080
PARKING AREA WEST OF LAB								
WPL–HB1	1–2	7.7	ND	ND	ND	ND	ND	ND
	5–6	1.4	ND	ND	ND	ND	ND	ND
	9–10	1.2	ND	ND	ND	ND	ND	ND
WPL–HB2	1–2	13.0	ND	ND	ND	ND	ND	ND
	5–6	3.6	ND	ND	ND	ND	ND	ND
	9–10	1.1	ND	ND	ND	ND	ND	ND

ND = Parameter Not Detected
NA = Parameter Not Analyzed

TABLE 4-6
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Investigation Soil Sampling
MW16 Soil Characteristics Analytical Results

Soil Boring	Depth (Feet)	Lithology	Field Moisture %	Field Dry Density lb/cu.ft	Gravel %	Sand %	Fines %	Specific Gravity	Porosity	Total Organic Carbon	Permeability (K) cm/sec
MW16	10	CL	13.8	122.5	0.0	26	74	2.65	0.28	ND	8×10^{-8}
	25	SW	7.0	110.5	0.0	88	12	NA	0.35	ND	8×10^{-6}
	52	CL/SW	15.1	115.2	0.0	47	53	NA	0.34	ND	3×10^{-7}
	65	SW	14.0	118.6	0.0	91	9	2.69	0.40	ND	1×10^{-3}

NA = Parameter not analyzed
ND = Parameter not detected
CL = Silty Clay
SW = Sand
CL/SW = Silty Clay grading to Sand

TABLE 4-7
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Groundwater Sampling
Halogenated Organic Analytical Results
(μg/L)

Well Identification	Tetra-chloro-ethene (PCE)	Tri-chloro-ethene (TCE)	1,1-Di-chloro-ethene (1,1-DCE)	1,1-Di-chloro-ethane (1,1-DCA)	1,2-Di-chloro-ethane (1,2-DCA)	Carbon tetra-chloride (CCL4)	Chloroform (CHCL3)	Cis-1,2-Di-chloro-ethene (Cis-DCE)	Methylene Chloride (MC)	Isopropyl-benzene (IPB)	Trans-1,2-Di-chloro-ethene (Trans-DCE)	1,2-Di-chloro-benzene (o-DCB)	Ethylene Dibromide (EDB)
SCC-MW01S	1.8	9.9	ND	ND	ND	ND	ND	0.87	ND	ND	ND	ND	NA
SCC-MW01D	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW03	0.5	25	2.5	1.6	ND	120	43	ND	1.3	ND	ND	ND	NA
SCC-MW04	ND	280	57	120	49	ND	15	24	18	ND	ND	ND	NA
SCC-MW04A	0.7	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SCC-MW06B	1.2	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW06D	ND	4.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW07	ND	55	5.7	32	76	ND	0.97	4.4	ND	ND	ND	ND	NA
SCC-MW09	ND	52	ND	31	ND	ND	ND	ND	48	31	ND	ND	NA
SCC-MW11	0.78	70	4.7	8.1	0.8	ND	1.3	0.77	ND	1.2	ND	0.58	NA
SCC-MW14S	0.6	56	11	7	5.6	ND	1.6	0.86	1	ND	ND	ND	NA
SCC-MW15S	0.61	4.1	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	NA
SCC-MW15D	1.4	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SCC-MW16	0.86	52	15	140	120	ND	0.88	13	ND	ND	2.4	ND	NA
MCL	5.0	5.0	6.0	--	0.5	0.5	--	6	--	--	10	--	0.02
SFS GW	ND - 1.4	ND - 2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

All analyses performed by EPA Method 524.2, except EDB analysis, performed by EPA 8011
ND = Analytical parameter not detected
NA = Analytical parameter not analyzed
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs during the year 1990.

TABLE 4-8
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Groundwater Sampling
Purgeable Aromatic & TPH Analytical Results
(μg/L)

Well Identification	Benzene	Ethyl-benzene	Toluene	Xylenes (Total)	TPH Mod. 8015
SCC-MW01S	ND	ND	ND	ND	NA
SCC-MW01D	ND	ND	ND	ND	NA
SCC-MW03	ND	1.6	0.76	3.0	NA
SCC-MW04	6.7	960	7.2	1,010	NA
SCC-MW04A	ND	ND	ND	ND	NA
SCC-MW06B	ND	1.1	ND	0.82	NA
SCC-MW06D	ND	ND	ND	ND	NA
SCC-MW07	ND	ND	ND	ND	NA
SCC-MW09	ND	3,600	2,800	6,190	NA
SCC-MW11	ND	130	1.7	2.3	NA
SCC-MW14S	ND	ND	ND	ND	NA
SCC-MW15S	ND	ND	ND	ND	NA
SCC-MW15D	ND	ND	ND	ND	NA
SCC-MW16	ND	1.0	0.69	1.6	ND
MCL	0.1	680	--	1,750	--
SFS GW	ND	ND	ND	ND	--

BTEX analyses performed by EPA Method 524.2.
ND = Analytical parameter not detected
NA = Analytical parameter not analyzed
TPH = Total Petroleum Hydrocarbons
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs during the year 1990.

TABLE 4-9
SOUTHERN CALIFORNIA CHEMICAL
RCRA Facility Phase II Groundwater Sampling
Inorganic Analytical Results
(mg/L)

Well Identification	Cadmium EPA-6010-L	Chromium (Hexavalent) EPA-7196	Chromium (Total) EPA-6010-L	Copper EPA-6010-L	Lead EPA-6010-L	Nickel EPA-6010-L	Zinc EPA-6010-L	Iron EPA-6010-L	pH EPA-150.1	Ammonia as Nitrogen EPA-350.3	Total Organic Carbon EPA-415.1
SCC-MW01S	ND	ND	ND	ND	ND	ND	NA	NA	7.3	0.6	10.7
SCC-MW01D	ND	ND	ND	ND	NA	NA	NA	NA	7.9	NA	NA
SCC-MW03	ND	ND	ND	ND	NA	NA	NA	NA	7.8	NA	NA
SCC-MW04	0.84	32.2	29.2	0.053	ND	ND	NA	NA	6.8	0.18	68.8
SCC-MW04-UF	0.89	29.6	30.8	0.029	NA	NA	NA	NA	NA	NA	NA
SCC-MW04A	ND	ND	ND	ND	NA	NA	NA	NA	7.6	NA	NA
SCC-MW06B	ND	ND	0.014	ND	ND	ND	NA	NA	7.4	NA	NA
SCC-MW06D	ND	ND	ND	ND	ND	ND	NA	NA	7.3	NA	NA
SCC-MW07	ND	ND	0.013	0.032	NA	NA	NA	NA	7.2	NA	NA
SCC-MW09	ND	ND	ND	ND	NA	NA	NA	NA	7.2	0.22	45.6
SCC-MW11	ND	ND	ND	ND	NA	NA	NA	NA	7.5	NA	NA
SCC-MW14S	ND	0.13	0.16	0.041	ND	ND	NA	NA	7.3	0.21	14.7
SCC-MW14S-UF	ND	0.17	0.25	0.16	NA	NA	NA	NA	NA	NA	NA
SCC-MW15S	ND	ND	ND	ND	ND	ND	NA	NA	7.5	NA	NA
SCC-MW15D	ND	ND	ND	ND	NA	NA	NA	NA	7.6	NA	NA
SCC-MW16	ND	ND	ND	ND	ND	ND	ND	ND	7.2	NA	NA
MCL	0.01	--	0.05	1.0	0.05	--	5.0	0.3	--	--	--
SFS GW	< 0.001	--	< 0.01	<0.02-0.05	<0.002-<0.003	--	<0.2-0.073	<0.10	7.68-8.10	--	--

ND = Analytical parameter not detected.
NA = Parameter not analyzed
MW = Monitor Well
MCL = Maximum Contaminant Limit
SFS GW = Range of concentrations in water supply wells tested in Santa Fe Springs in the year 1990.
-- = Value not available
UF = Unfiltered sample.

Soil Vapor Survey

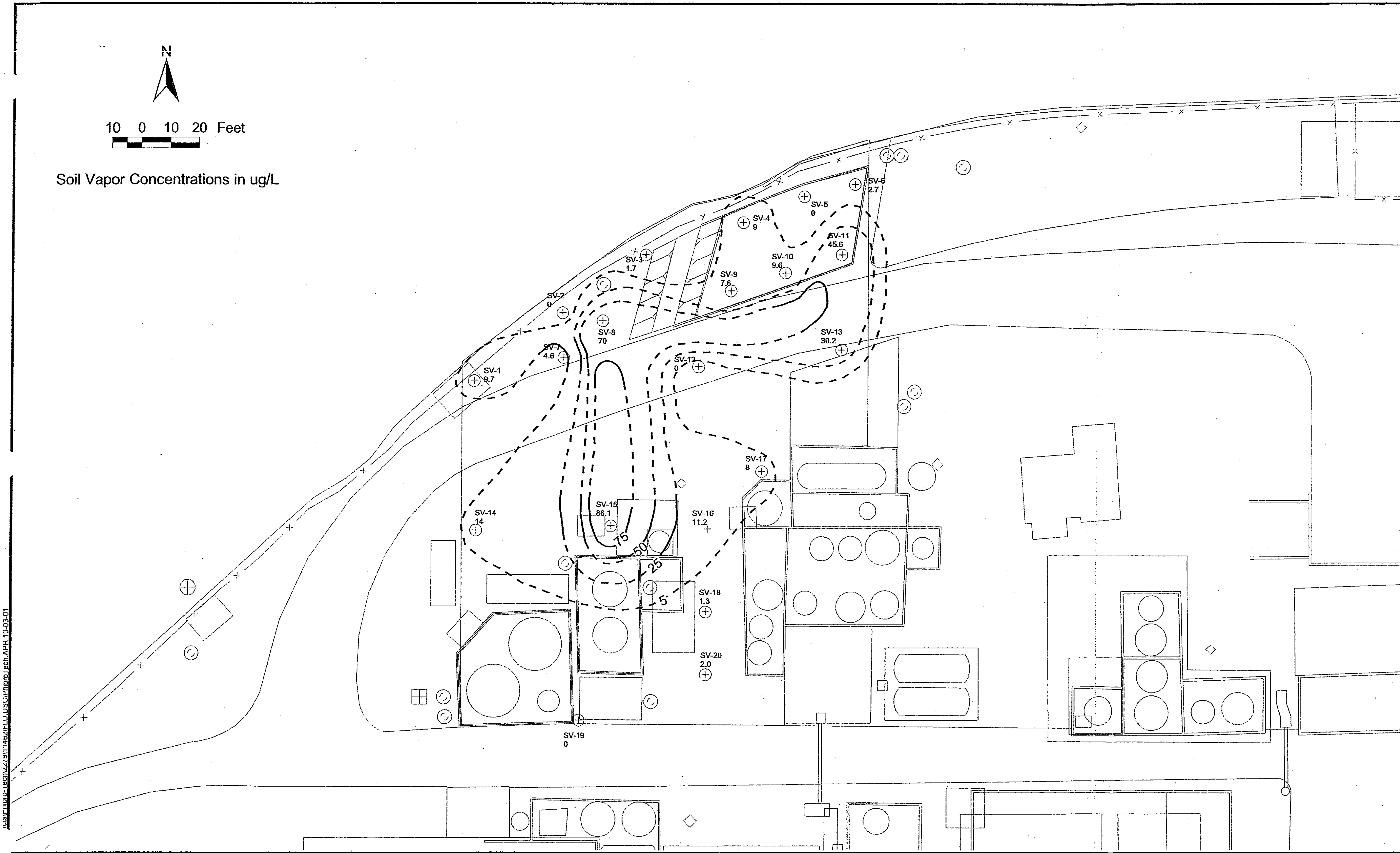
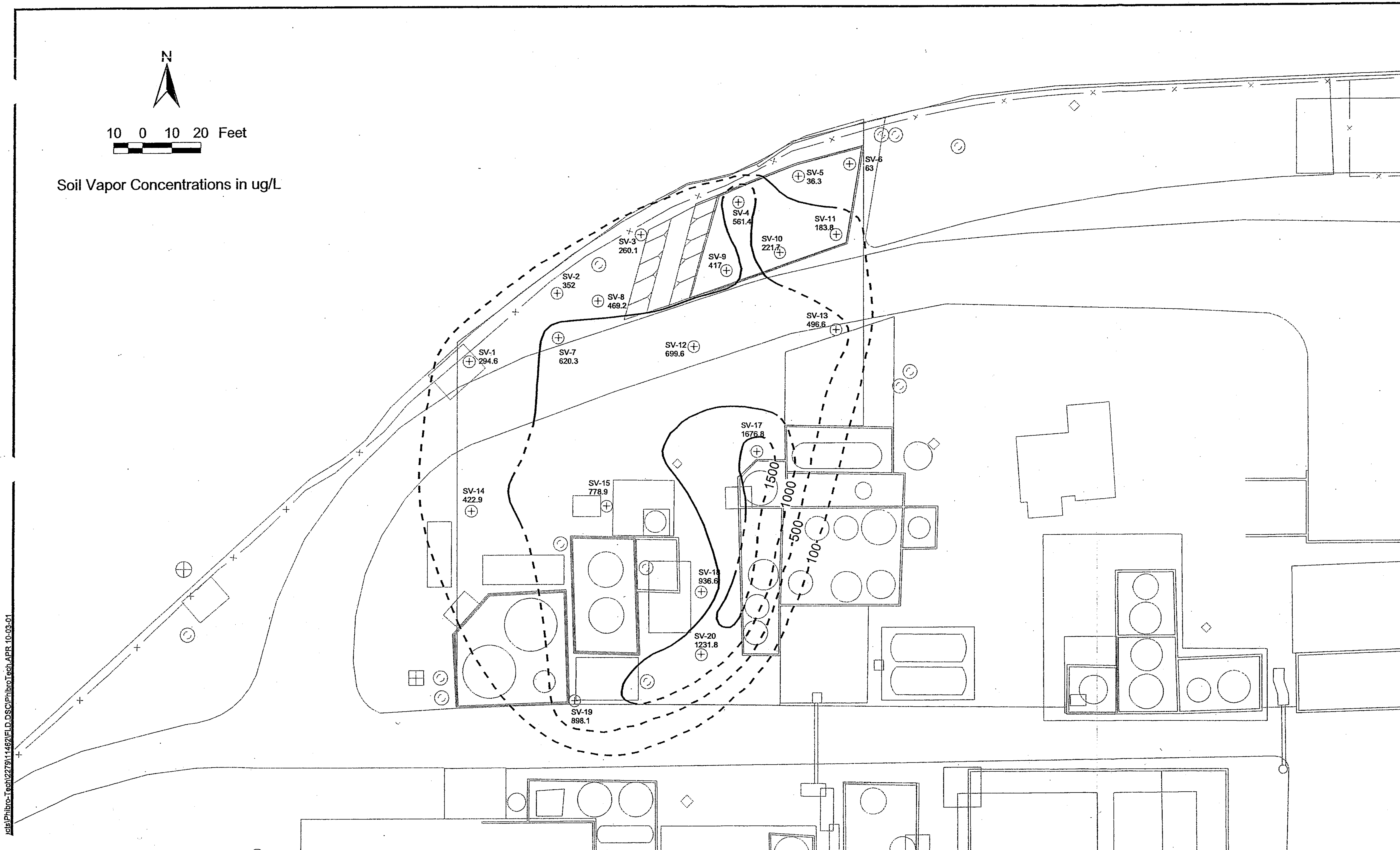


Figure 3-1
Total VOCs (shallow) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

CDM Camp Dresser & McKee



CDM Camp Dresser & McKee

Figure 3-2
Total VOCs (deep) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

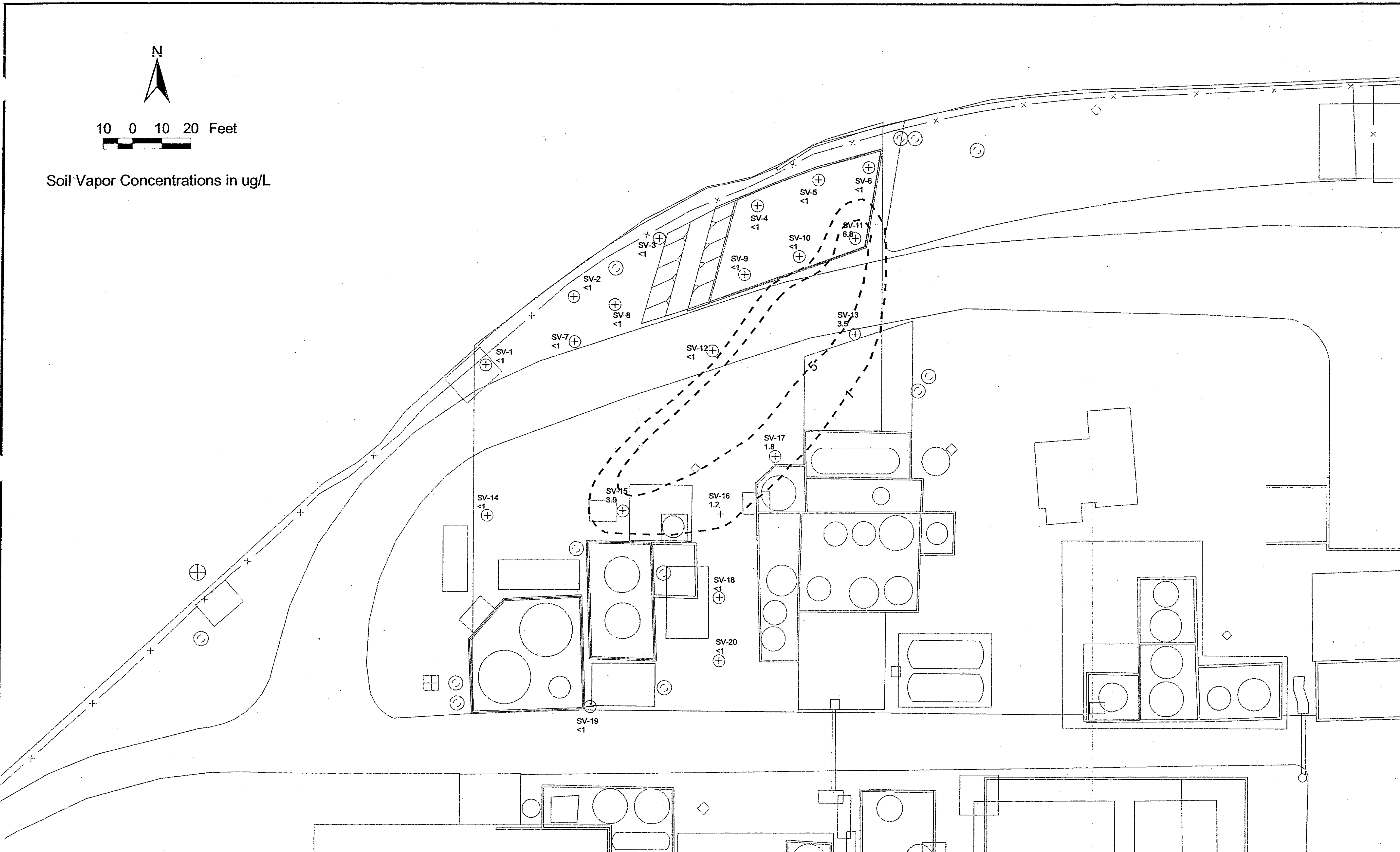
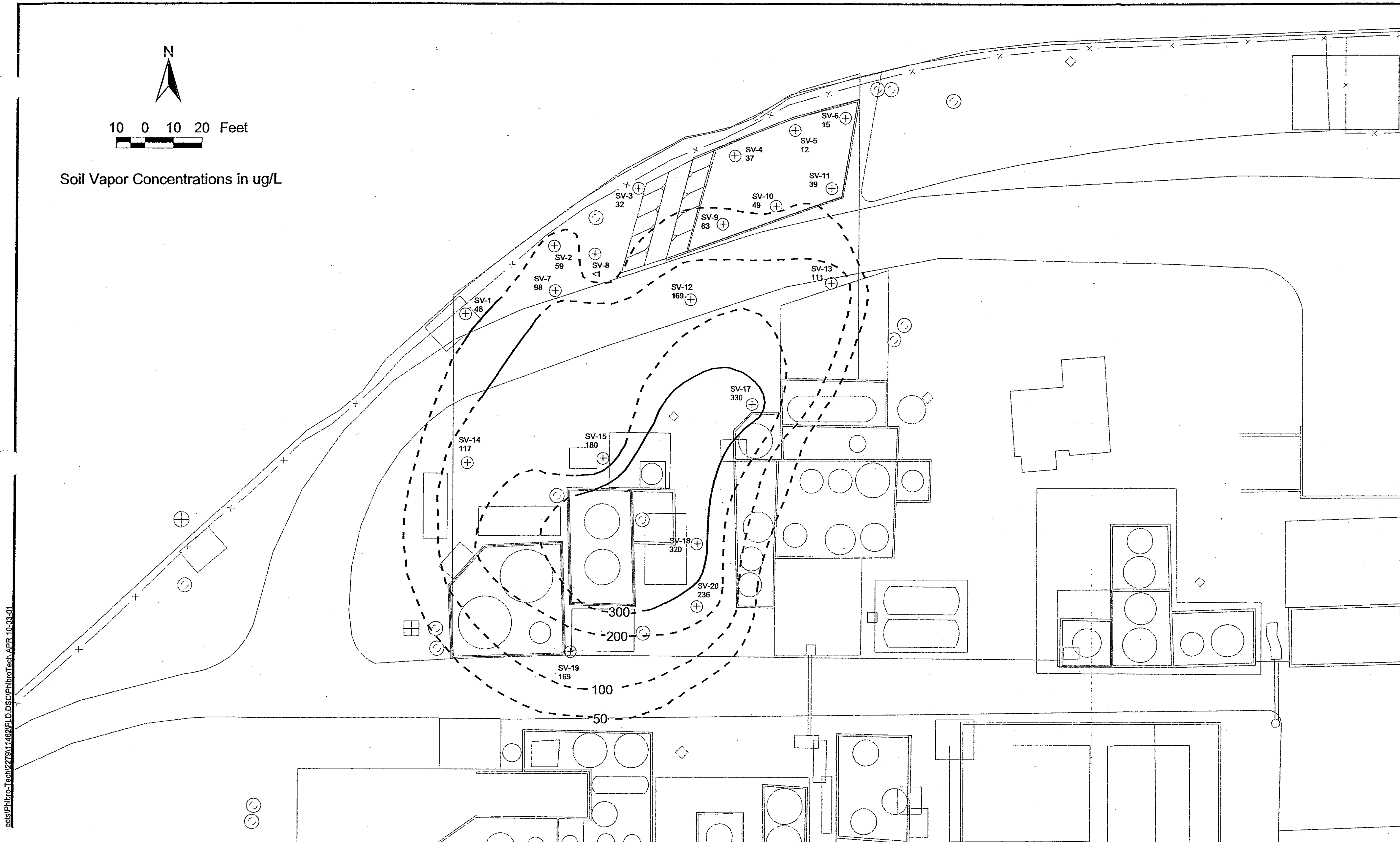


Figure 3-3
1,1-DCE (shallow) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

CDM Camp Dresser & McKee



CDM Camp Dresser & McKee

Figure 3-4
1,1-DCE (deep) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

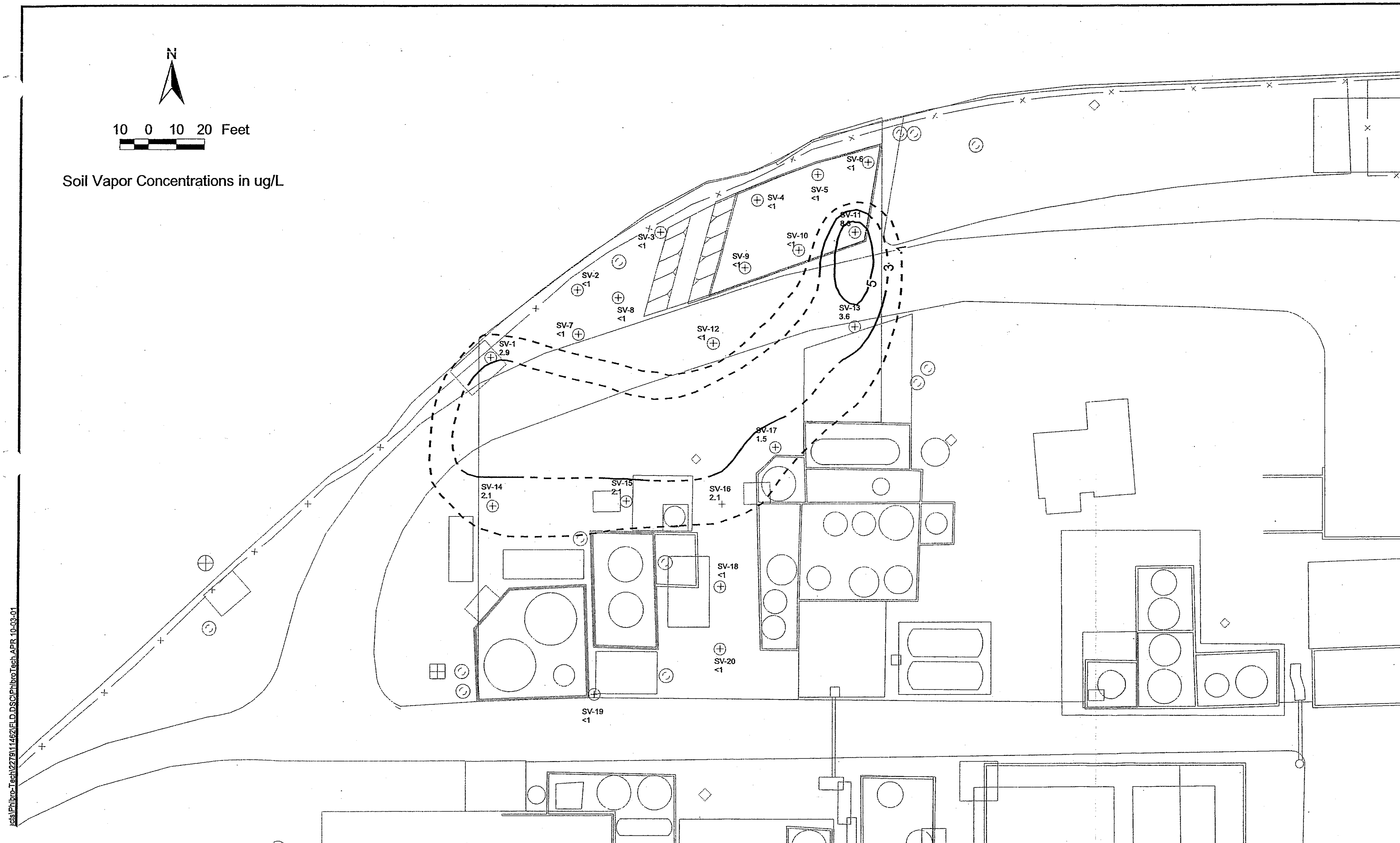
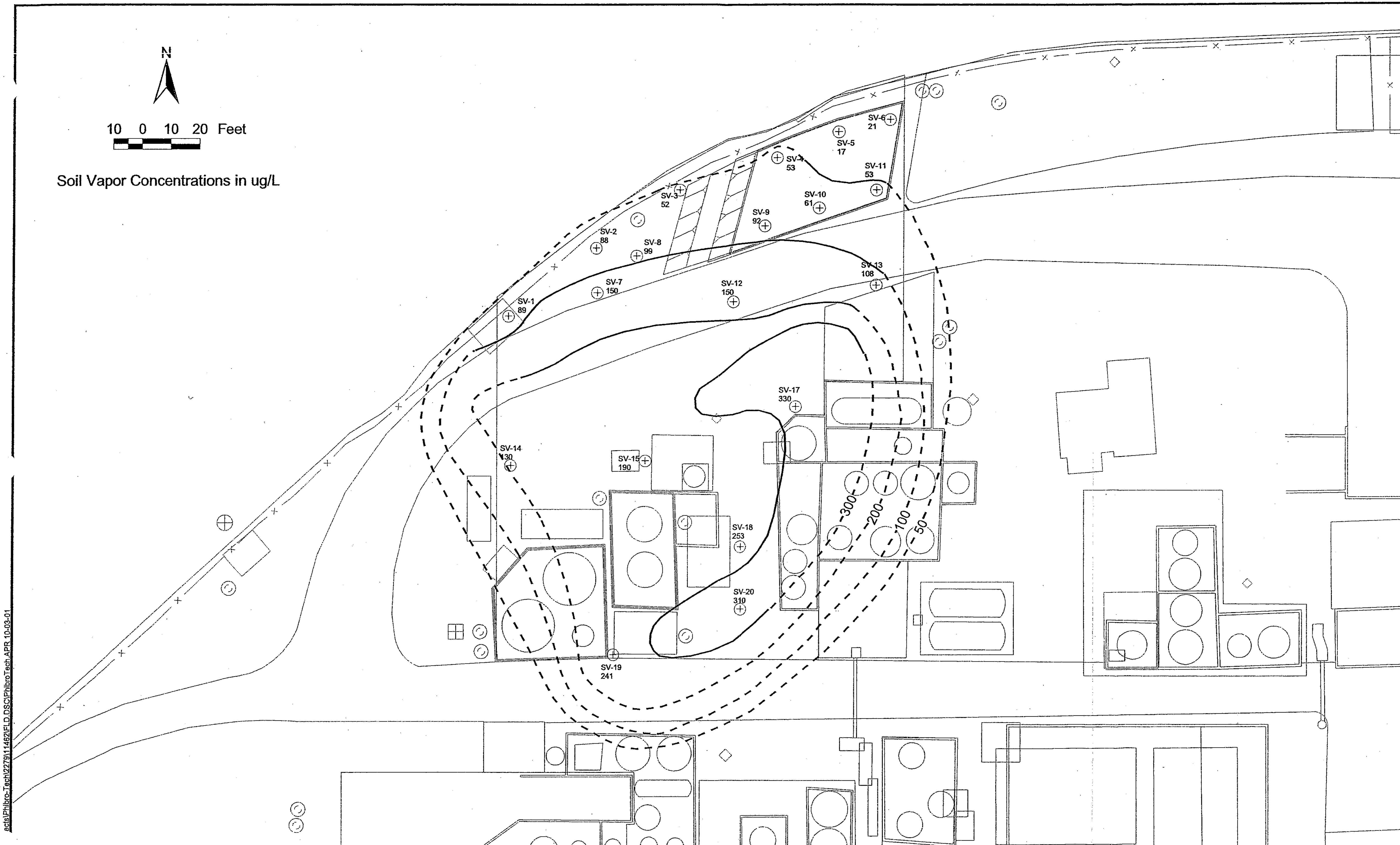


Figure 3-5
1,1-DCA (shallow) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility



CDM Camp Dresser & McKee

Figure 3-6
1,1-DCA (deep) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

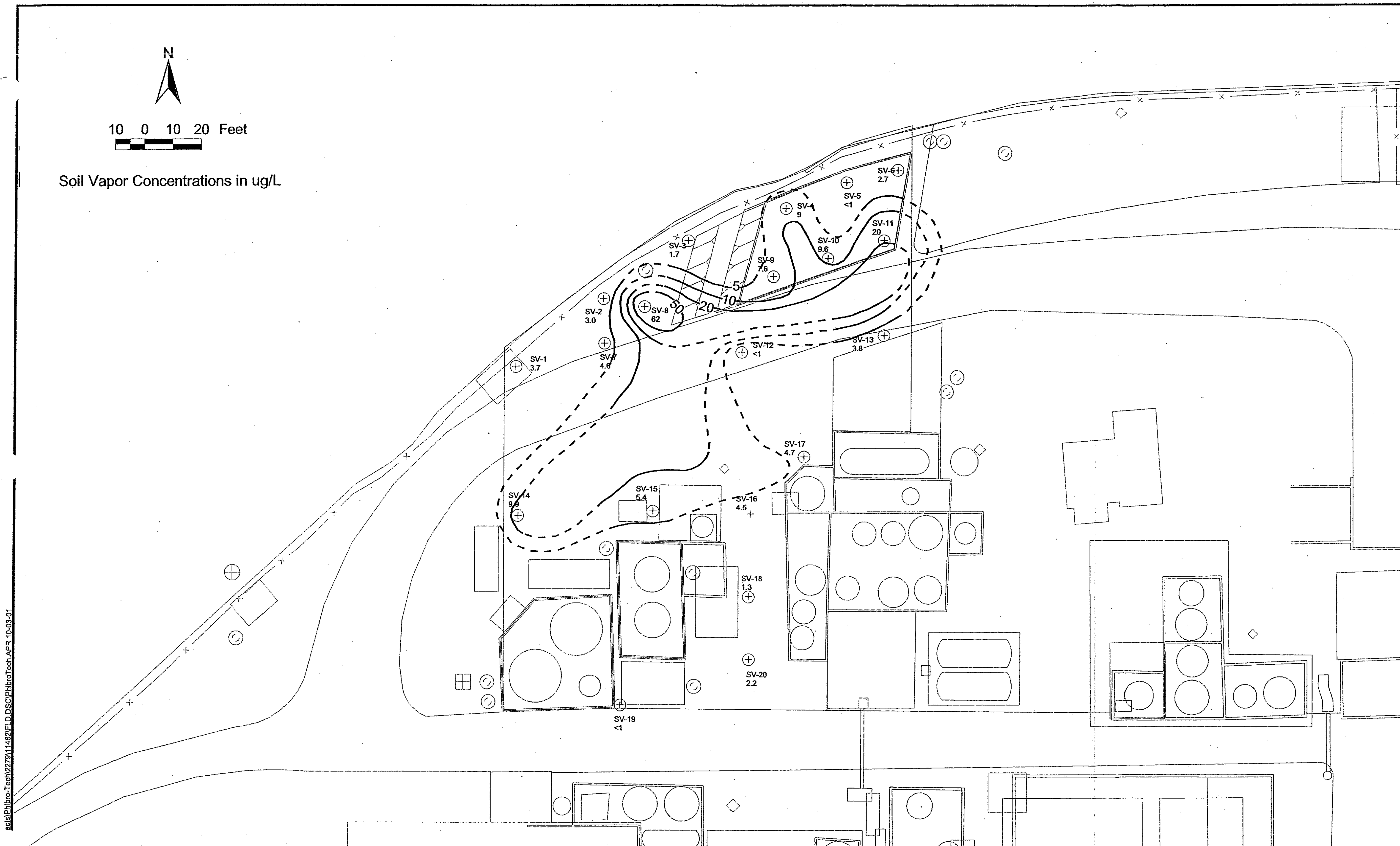


Figure 3-7
TCE (shallow) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

CDM Camp Dresser & McKee

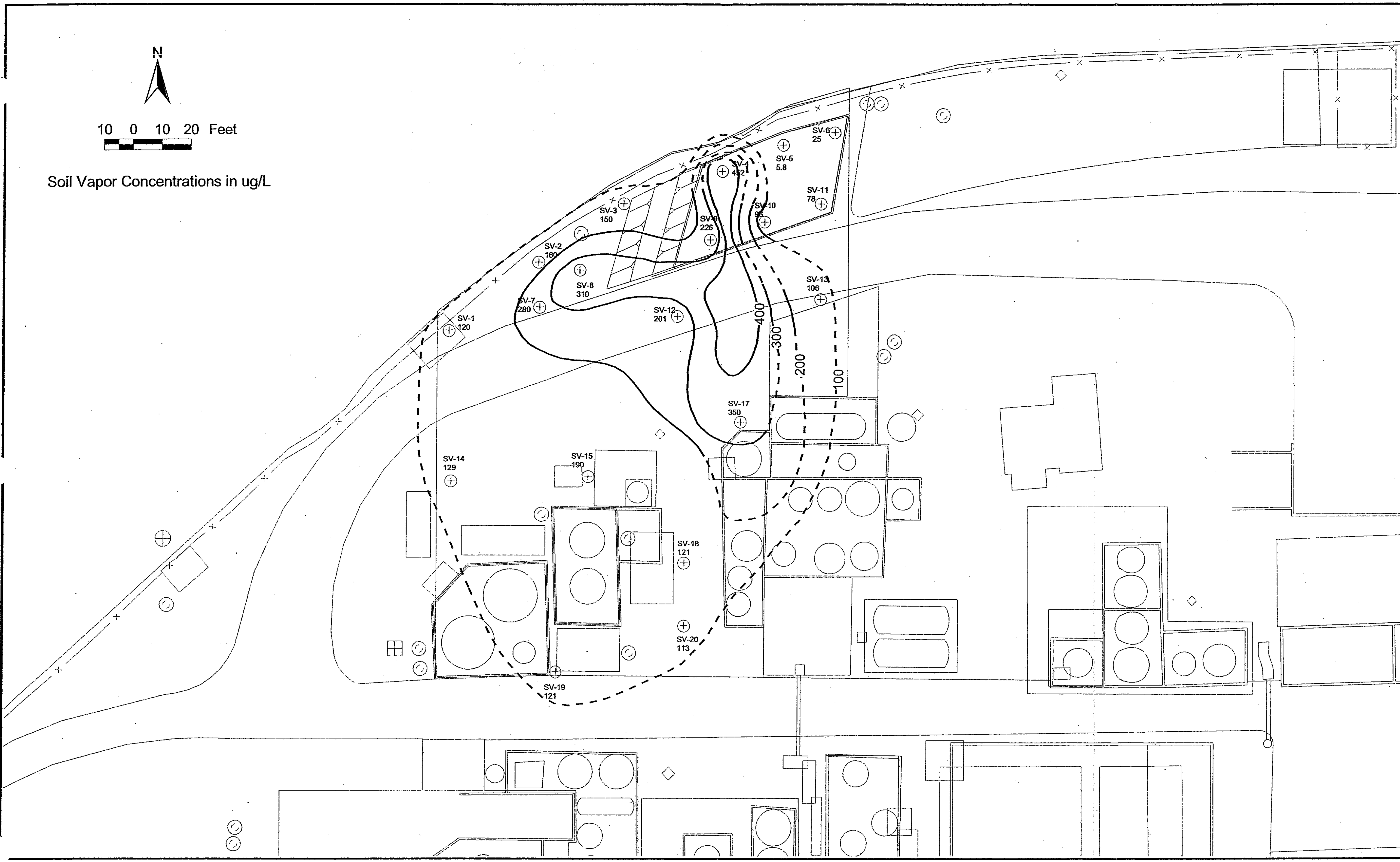
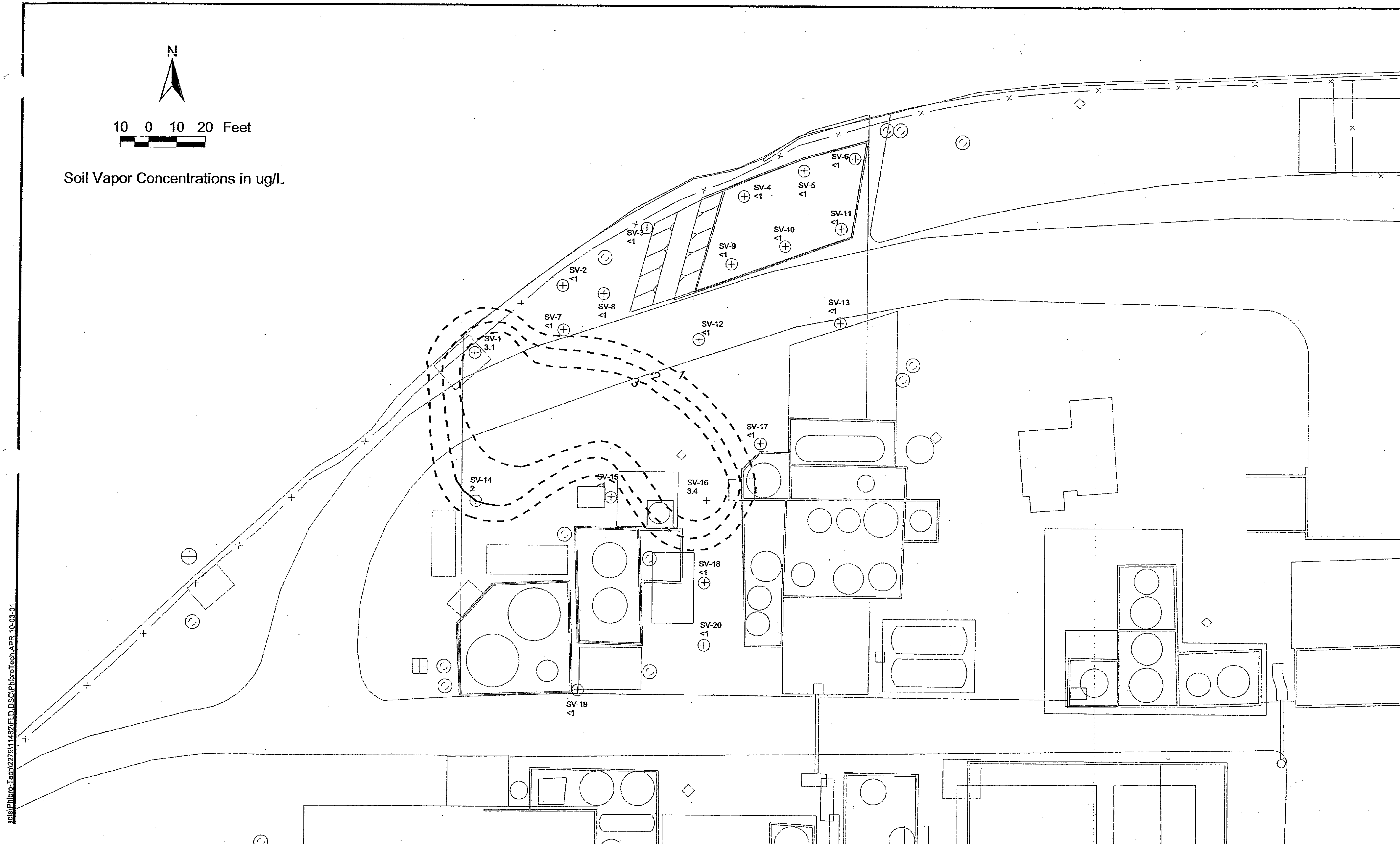


Figure 3-8
TCE (deep) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

CDM Camp Dresser & McKee



CDM Camp Dresser & McKee

Figure 3-9
1,1,1-TCA (shallow) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

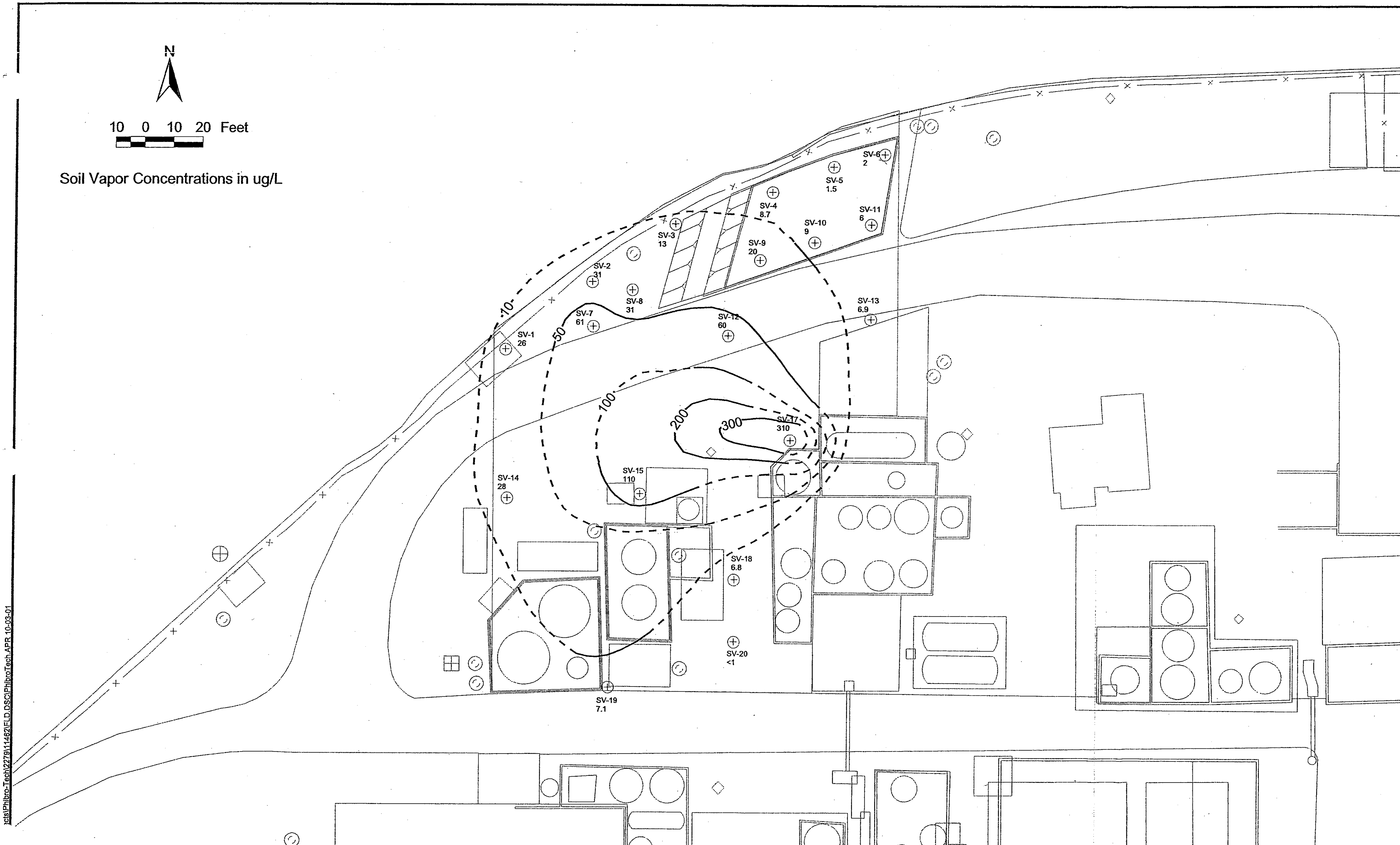


Figure 3-10
1,1,1-TCA (deep) Soil Vapor Contours
Phibro-Tech, Inc. - Santa Fe Springs Facility

CDM Camp Dresser & McKee

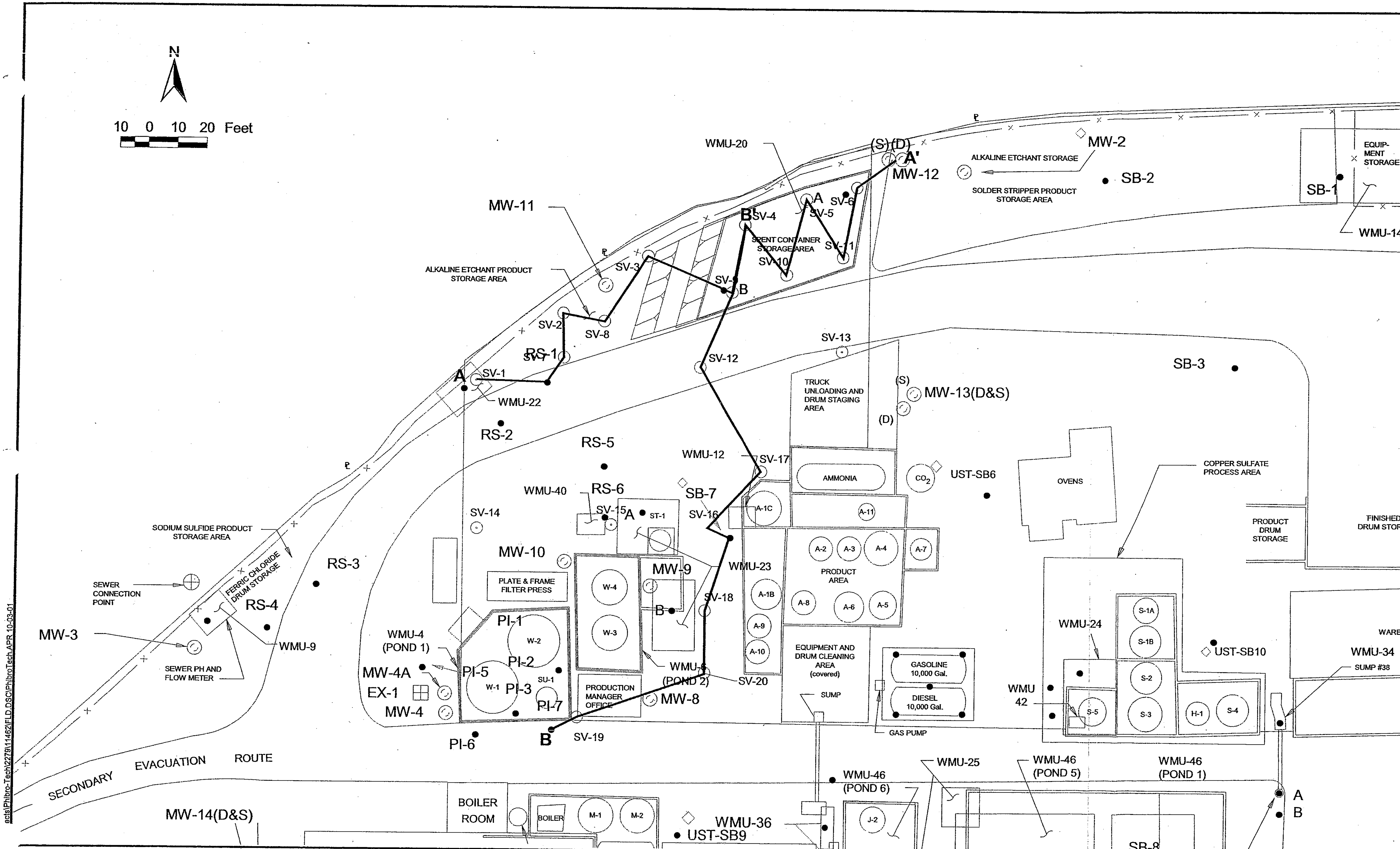


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Figure 3-11
Cross Section Locations
Phibro-Tech, Inc. - Santa Fe Springs Facility

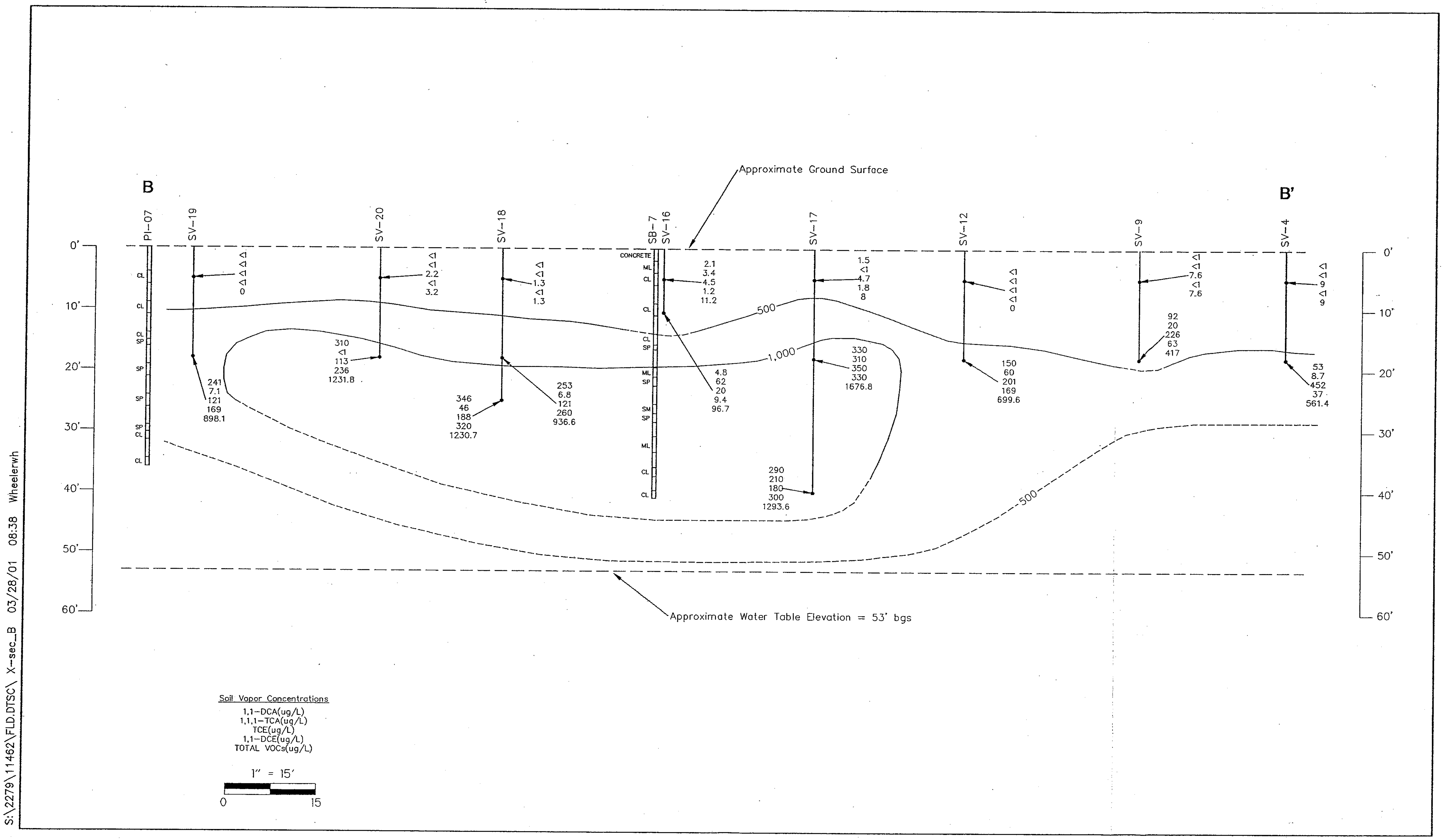

Figure 3-12
Soil Vapor Concentrations for Cross Section B-B'
Phibro-Tech, Inc. - Santa Fe Springs Facility

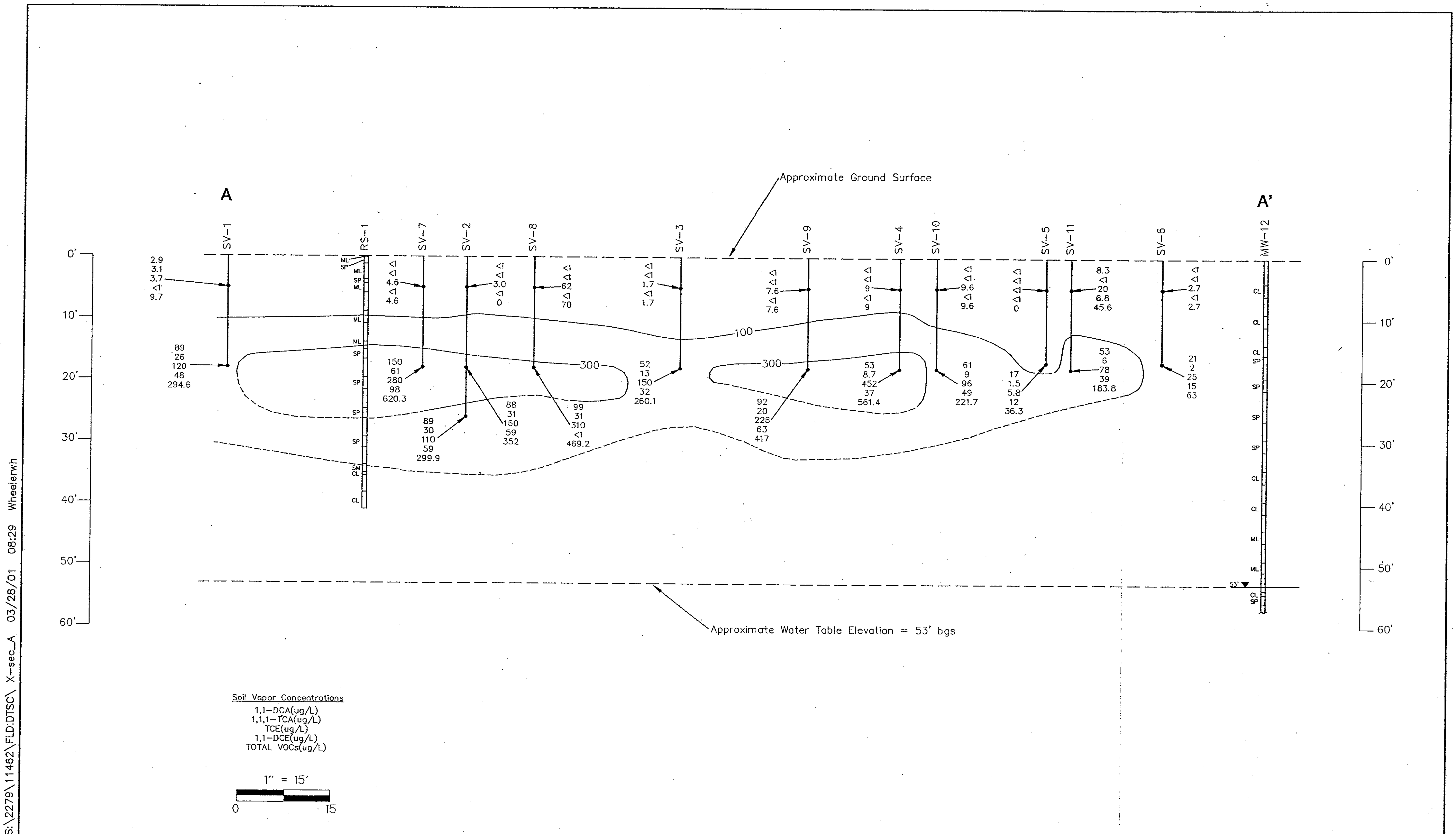

Figure 3-13
Soil Vapor Concentrations for Cross Section A-A'
Phibro-Tech, Inc. - Santa Fe Springs Facility

CDM Camp Dresser & McKee

Table 3-1
Soil Gas Survey Analytical Results
Phibro-Tech, Inc
March 2001

Boring Location	Sample Depth (ft bgs)	Volatile Organic Compounds (VOCs): Freon 12	Vinyl Chloride	Chloro-ethane	Freon 11	Dichloro-methane	trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	Chloroform	1,1,1-TCA	Carbon Tetra-chloride	1,2-DCA	TCE	1,1,2-TCA	PCE	1,1,1,2-PCA	1,1,2,2-PCA	1,1-DCE	Benzene	Toluene	Ethyl Benzene	m/p-Xylene	o-Xylene	Freon-113	Total Detected VOCs
SV-1	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.9	ND<1	ND<1	3.1	ND<1	ND<1	3.7	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	9.7
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	89	4.5	4.9	26	ND<1	ND<1	120	ND<1	2.2	ND<1	ND<1	48	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	294.6
SV-2	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	3.0	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	0.0
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	88	8.7	5.3	31	ND<1	ND<1	160	ND<1	2.2	ND<1	ND<1	56	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	351.2
	26	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	89	7	4.9	30	ND<1	ND<1	110	ND<1	ND<1	ND<1	ND<1	59	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	299.9
	26(K)	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	83	6.7	4.6	29	ND<1	ND<1	97	ND<1	ND<1	ND<1	ND<1	55	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	275.3
SV-3	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	1.7	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	1.7
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	52	4.3	2.6	13	ND<1	ND<1	150	ND<1	6.2	ND<1	ND<1	32	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	260.1
SV-4	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	9	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	9.0
	5(K)	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	5.1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	5.1
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	53	6.4	2.5	8.7	ND<1	ND<1	450	ND<1	1.5	ND<1	ND<1	37	ND<1	ND<1	ND<1	ND<1	ND<1	2.3	561.4
	18(K)	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	35	3	1.2	5.2	ND<1	ND<1	200	ND<1	ND<1	ND<1	ND<1	24	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	268.4
	18(K)(K)	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	32	2.7	ND<1	4.8	ND<1	ND<1	180	ND<1	ND<1	ND<1	ND<1	21	ND<1	ND<1	ND<1	ND<1	ND<1	1.8	242.3
SV-5	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	0.0
	5(K)	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	0.0
	17	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	17	ND<1	ND<1	1.5	ND<1	ND<1	5.8	ND<1	ND<1	ND<1	ND<1	12	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	36.3
SV-6	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.7	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.7
	17A	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	6.8	ND<1	ND<1	ND<1	ND<1	ND<1	9	ND<1	ND<1	ND<1	ND<1	5.9	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	21.7
	17B	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	12	ND<1	ND<1	ND<1	ND<1	ND<1	13	ND<1	ND<1	ND<1	ND<1	9.7	ND<1	ND<1	ND<1	ND<1	ND<1	1.9	36.6
	17C	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	21	ND<1	ND<1	2	ND<1	ND<1	25	ND<1	ND<1	ND<1	ND<1	15	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	63.0
SV-7	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	4.6	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	4.6
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	150	15	11	61	ND<1	ND<1	280	ND<1	5.3	ND<1	ND<1	98	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	620.3
SV-8	5	ND<1	ND<1	ND<1	ND<1	ND<1	1.2	ND<1	6.8	ND<1	ND<1	ND<1	ND<1	62	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	70.0
	5(K)	ND<1	ND<1	ND<1	ND<1	ND<1	1.1	ND<1	6.1	ND<1	ND<1	ND<1	ND<1	56	ND<1	ND<1	ND<1	ND<1	1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	64.2
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	99	23	6.2	31	ND<1	ND<1	310	ND<1	2.0	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	469.2
SV-9	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	7.6	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	7.6
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	92	5.8	3.7	20	ND<1	ND<1	230	ND<1	2.5	ND<1	ND<1	63	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	417.0
	18(K)	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	92	5.7	3.8	19	ND<1	ND<1	210	ND<1	3.1	ND<1	ND<1	60	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	393.6
SV-10	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	9.6	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	9.6
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	61	2	2.5	9	ND<1	ND<1	96	2.2	ND<1	ND<1	ND<1	49	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	221.7
SV-11	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	8.3	8.4	ND<1	ND<1	ND<1	ND<1	20	ND<1	ND<1	ND<1	ND<1	6.8	2.1	ND<1	ND<1	ND<1	ND<1	ND<1	45.6
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	53	ND<1	2.2	6	ND<1	ND<1	78	ND<1	ND<1	ND<1	ND<1	39	ND<1	ND<1	ND<1	ND<1	ND<1	5.5	183.7
SV-12	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	0.0
	18	ND<1	ND<1	4	ND<1	ND<1	8.7	150	21	12	60	ND<1	ND<1	200	ND<1	3.5	ND<1	ND<1	170	ND<1	ND<1	1.1	2.3	ND<1	67	699.6
SV-13	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	3.6	ND<1	ND<1	ND<1	ND<1	ND<1	3.8	ND<1	ND<1	ND<1	ND<1	3.5	1.3	ND<1	ND<1	ND<1	ND<1	18	30.2
	18	ND<1	ND<1	6.7	ND<1	ND<1	25	108	14	2.9	6.9	ND<1	ND<1	106	ND<1	1.4	ND<1	ND<1	110	6.8	ND<1	2.4	6.5	ND<1	100	496.6
SV-14	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.1	ND<1	ND<1	2	ND<1	ND<1	9.9	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	14.0
	18	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	130	6.5	8.6	28	ND<1	ND<1	129	ND<1	3.8	ND<1	ND<1	120	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	425.9
SV-15	5	ND<1	ND<1	ND<1	ND<1	ND<1	1.7	2.1	73	ND<1	ND<1	ND<1	ND<1	5.4	ND<1	ND<1	ND<1	ND<1	3.9	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	86.1
	18	ND<1	ND<1	2.4	ND<1	2.3	4.8	190	73	19	110	ND<1	ND<1	190	ND<1	3.8	ND<1	ND<1	180	1.8	1.8	ND<1	ND<1	ND<1	ND<1	778.9
	18(K)	ND<1	ND<1	2.4	ND<1	2.1	4.5	180	63	16	98	ND<1	ND<1	170	ND<1	3.4	ND<1	ND<1	180	1.8	1.7	ND<1	ND<1	ND<1	ND<1	722.9
SV-16	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.1	ND<1	ND<1	3.4	ND<1	ND<1	4.5	ND<1	ND<1	ND<1	ND<1	1.2	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	11.2
	10.5	ND<1	ND<1	ND<1	ND<1	7.9	ND<1	4.8	ND<1	2	62	ND<1	ND<1	20	ND<1	ND<1	ND<1	ND<1	9.6	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	106.3
SV-17	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	1.5	ND<1	ND<1	ND<1	ND<1	ND<1	4.7	ND<1	ND<1	ND<1	ND<1	1.8	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	8.0
	18	ND<1	ND<1	22	1.2	21	27	330	30	30	310	ND<1	2.7	350	ND<1	11	ND<1	ND<1	330	7.3	11	ND<1	3.6	ND<1	190	1676.8
	28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0
	40	ND<1	1.3	24	1.5	17	23	290	23	26	210	ND<1	ND<1	180	ND<1	2.1	ND<1	ND<1	300	ND<1	ND<1	1.6	4.1	ND<1	190	1293.6
SV-18	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	1.3	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	1.3
	18	ND<1	1.4	8.6	1	4.4	9.3	250	16	5	6.8	ND<1	ND<1	120	ND<1	2	ND<1	ND<1	260	8.6	ND<1	ND<1	3.5	ND<1	240	936.6
	25	ND<1	1.8	27	1.6	6.3	14	350	24	13	46	ND<1	ND<1	190	ND<1	2.6	ND<1	ND<1	320	ND<1	ND<1	3.5	8.1	ND<1	300	1307.9
	25(K)	ND<1	1.7	26	1.6	5.8	13	330	22	13	46	ND<1	ND<1	190	ND<1	2	ND<1	ND<1	300	ND<1	ND<1	2	7.6	ND<1	270	1230.7
SV-19	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	0.0
	18	ND<1	ND<1	6.1	ND<1	3.3	22	240	31	3.1	7.1	ND<1	ND<1	120	ND<1	1.2	ND<1	ND<1	170	5.6	4.1	2.5	2.1	ND<1	280	898.1
SV-20	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.0
	5(K)	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	3.2	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	3.2
	18	ND<1	ND<1	29	1.7	2.4	31	310	35	ND<1	ND<1	ND<1	ND<1	110	ND<1	ND<1	ND<1	ND<1	240	12	7.2	ND<1	3.5	ND<1	450	1231.8
	18(K)	ND<1	ND<1	27	1.8	2.4	31	320	36	ND<1	ND<1	ND<1	ND<1	110	ND<1	ND<1	ND<1	ND<1	230	12	7	ND<1	3.1	ND<1	450	1230.3

Note: All results in micrograms per liter. Purge volume test performed at location SV-6, sample A = 100 cc, sample B = 200 cc, and sample C = 300 cc.
NA - not analyzed (field screening with the PID during purging indicated the presence of VOCs)
K - duplicate

Table 4-1. Comaprison of Soil Vapc. ɹnd Groundwater VOC Concentrations

Volatile Organic Compound	MW-9 Groundwater Result (ug/L of water)	SV-18 Soil Vapor Result at 25 Feet (ug/L of vapor)	MW-4 Groundwater Result (ug/L of water)	SV-19 Soil Vapor Result at 18 Feet (ug/L of vapor)	MW-11 Groundwater Result (ug/L of water)	SV-2 Soil Vapor Result at 26 Feet (ug/L of vapor)	SV-3 Soil Vapor Result at 18 Feet (ug/L of vapor)	SV-8 Soil Vapor Result at 18 Feet (ug/L of vapor)
TCE	160	188	170	121	2900	110	150	310
1,1-DCA	130	346	74	241	360	89	52	99
1,2-DCA	96	320	99	<1	220	<1	<1	<1
1,1-DCE	37	<1	<50	169	480	59	32	<1
ethylbenzene	29	3.5	2500	2.5	<50	<1	<1	<1
chloroform	22	13	<50	3.1	910	4.9	2.6	6.2
1,1,1-TCA	15	46	<50	7.1	<50	30	13	31
cis-DCE	11	24	130	31	<50	7	4.3	23
PCE	<5	2.6	<50	1.2	69	<1	6.2	2
Freon 113	<5	297	<50	282	<50	<1	<1	<1
trans-DCE	<5	14	<50	22	<50	<1	<1	<1
m/p xylenes	<5	8.1	<50	2.1	<50	<1	<1	<1
1,1,2-TCA	<5	2.6	<50	<1	<50	<1	<1	<1
dichloromethane	<5	6.3	<50	3.3	<50	<1	<1	<1
Freon 11	<5	1.6	<50	<1	<50	<1	<1	<1
chloroethane	<5	<1	<50	1.6	<100	<1	<1	<1
benzene	<5	<1	<50	5.6	<50	<1	<1	<1
carbon tetrachloride	<5	<1	<50	<1	980	<1	<1	<1
toluene	<5	<1	<50	4.1	<50	<1	<1	<1

Shaded rows indicate results that do not support groundwater as the sole source of VOCs in soil vapor.
Groundwater sample collected 10/19/00.